



TEST REPORT N° : ASCV-19SE1310LTSZP

TEST REPORT

| | | | |
|----------|---|----------|---|
| To: | SHENZHEN ECH LIGHTING CO., LIMITED | To: | - |
| Attn: | ADMINISTR. | Attn: | - |
| Address: | No. 4, Huangpu Road, Gangnan District, Pingli Street, Longgang, Shenzhen, Guangdong, China, 518000 | Address: | - |
| Fax: | | Fax: | |
| E-mail: | admin@echlighting.com | E-mail: | - |

This document includes: 35 pages/ annex1: instruction sheet

| | | | |
|--|----------------------------|--|--------------------------|
| Factory name: | Same as applicant | Offer: | ASCV-19SE16-001 LTSZP-A0 |
| Location: | Same as applicant | Sample No: | - |
| See picture on page 6 to 14 | Start date: | September 11, 2019 | |
| | Finish date: | September 18, 2019 | |
| | Standards used: (Date): | EN 60598-1 :2015+A 1:2018 EN 60598-2-1: 1989 EN 62493:2015 | |
| | Sections examined: | All sections Details see page 2 | |
| | Re-testing: | None | |
| LED Tri-proof Light Model: See model list on page 3 | Remark / Note: | None | |

The results given in this report are related to the tested specimen of the described electrical apparatus.

CONCLUSION: The samples comply with the requirements of the examined standards after modification.

| | |
|---------------------------------|---------------------------------|
| Test done by, <i>Lina WU</i> | Approved by, <i>Kevin WU</i> |
| Engineer: Lina WU | Senior Engineer: Kevin WU |
| Date: September 18, 2019 | Date: September 18, 2019 |

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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HISTORICAL OF SAMPLE RECEIVED

| LCIE CHINA RECORDED N° | DETAIL OF THE SAMPLE | SPECIAL REMARKS |
|------------------------|----------------------|-----------------|
| -- | -- | -- |

EXAMINED SECTIONS

The product covered in this report is class I fixed luminaire intended to indoor and outdoor use.

The report is Co-report based on original report KPK-18NO269LCZP-1 dated on March 14, 2019 for update the applicant and model number.

The tests have been performed on the product: models see model list on page 3.

All models have similar construction and use same LED chip. The major differences among them are the model no., dimension, wattage and LED quantity.

All models can be the interconnected lighting, the use of external or interconnecting cable is 3 x 2,5 mm² for 3000W of maximum power of luminaires that may be interconnected; the use of external or interconnecting cable is 3 x 1,5 mm² for 2000W of maximum power of luminaires that may be interconnected.

According to information of model list, we perform tests as below:

Full tests for model IT-LTF-5F-60W(Linkable);

Sections 0 to 8, 11, 12.3 and 12.4 for model IT-L9-5F-60W(Linkable);

Sections 0 to 8, 11 and 12.4 for models IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W;

Sections 0 to 8, 11 for other models

These products have been evaluated according to EN 62471:2008 and classified as exempt group, see test report: ASCV-19SE1360LTSZP dated on September 18, 2019 for details;

These products have been evaluated according to IEC/TR 62778:2014 and classified as Risk Group 0, see test report: ASCV-19SE1360LTSZP-1 dated on September 18, 2019 for details;

All sections of EN 62493:2015 have been evaluated. According to clause 4.2 and Annex H, because the samples are LED-light-source technology, so, all samples were deemed to comply with the requirements of this standard without testing because it fulfills the inherent-compliance conditions;

The LED module has been evaluated according to EN 62031:2008+A1:2013+A2:2015.

The sample listed (models see model list on page 3) is covered by the conclusion on page 1.

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Model list:

| Model No. | Rated Voltage (V) | Rated power (W) | LED driver | LED quantities (pcs) | Maximum number of interconnected luminaires (pcs) | | CCT | Size (mm) |
|-------------------------|--------------------|-----------------|----------------|----------------------|---|-------------------------|---------------------|----------------|
| | | | | | P _{Max.} 3000W | P _{Max.} 2000W | | |
| IT-LTF-20W | 220-240V ~ 50/60Hz | 20 | BK-CHL024-0550 | -- | -- | -- | 4000K, 5000K, 6000K | 623 x 75 x 60 |
| IT-LTF-20W(Linkable) | | | | 144 | 131 | 87 | | |
| IT-L9-2F-20W | | | | -- | -- | -- | | |
| IT-L9-2F-20W(Linkable) | | | | 144 | 131 | 87 | | |
| IT-LTF-4F-40W | | 40 | BK-CHL042-1050 | -- | -- | -- | | 1223 x 75 x 60 |
| IT-LTF-4F-40W(Linkable) | | | | 288 | 72 | 48 | | |
| IT-L9-4F-40W | | | | -- | -- | -- | | |
| IT-L9-4F-40W(Linkable) | | | | 288 | 72 | 48 | | |
| IT-LTF-5F-50W | | 50 | BK-CHL050-1250 | -- | -- | -- | | 1523 x 75 x 60 |
| IT-LTF-5F-50W(Linkable) | | | | 432 | 48 | 32 | | |
| IT-L9-5F-50W | | | | -- | -- | -- | | |
| IT-L9-5F-50W(Linkable) | | | | 432 | 48 | 32 | | |
| IT-LTF-5F-60W | | 60 | BK-CHL060-1500 | -- | -- | -- | | 1523 x 75 x 60 |
| IT-LTF-5F-60W(Linkable) | | | | 432 | 48 | 32 | | |
| IT-L9-5F-60W | | | | -- | -- | -- | | |
| IT-L9-5F-60W(Linkable) | | | | 432 | 48 | 32 | | |

Note: models IT-LTF-20W(Linkable), IT-L9-2F-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-L9-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-L9-5F-50W(Linkable), IT-LTF-5F-60W(Linkable), IT-L9-5F-60W(Linkable) can be interconnected.




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COPY OF RATING PLATE:

Representative rating label
(Taken IT-L9-5F-60W to example)

LED Tri-proof light

Model: IT-L9-5F-60W
Input Voltage: 220-240V~50/60HZ
Dimension: 1500mm
Power: 60W
Ta:45°C
CCT: 5000K
CRI: >80
Beam Angle: 120°
IP Grade:IP65
Material: PC
Date: 201908

Location: Affixed on position where visible during installation

Input


Location: affixed on enclosure near input connector, visible during installation

Output
 Max quantity of Interconnecting 48 pcs;
 Max. 3000 W

Location: affixed on enclosure near output connector , visible during installation

L ⚡ N

Location: Printed on input connector, visible during installation.



Location: affixed on enclosure, visible during re-lamping

Note:

- 1, Rating labels for other models have same format, except different model number, rated power and some technical parameters, details see model list on page 3.
- 2, The height of the numeral and letter is not less than 2 mm; the symbol of “WEEE” is not less than 7 mm and the height of other symbol is not less than 5 mm.
3. The height of symbol of “cation, risk of electrical shock” is not less than 15 mm.

Only markings in English Language present on the sample tested were checked and validated during this examination.
The text required by the standard should be translated into the official language of the country where the appliance will be sold.



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MARKING OF TRANSFORMER:

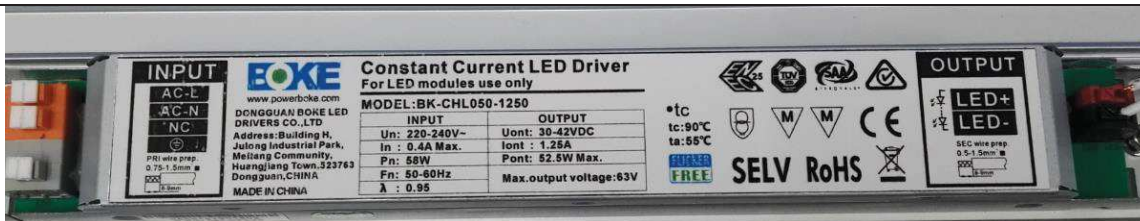
For model BK-CHL024-0550



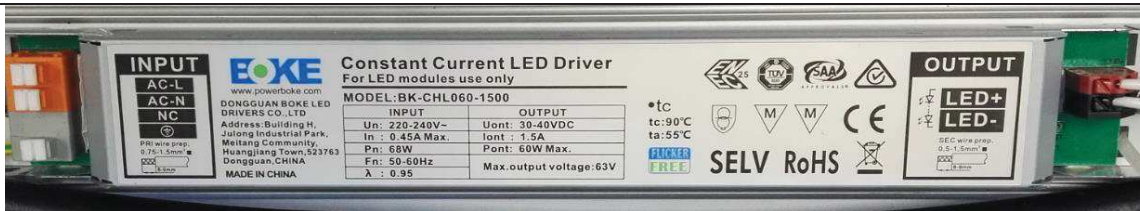
For model BK-CHL042-1050



For model BK-CHL050-1250







For model BK-CHL060-1500



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PICTURE OF THE SAMPLE TESTED:

| | |
|--|---|
| <p style="text-align: center;">IT-LTF-5F-60W(Linkable)</p>  <p>Note: models IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable) have same construction with model IT-LTF-5F-60W(Linkable) except the dimension of product.</p> | <p style="text-align: center;">IT-LTF-5F-60W</p>  <p>Note: models IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W have same construction with model IT-LTF-5F-60W except the dimension of product.</p> |
| <p style="text-align: center;">IT-L9-5F-60W(Linkable)</p>  <p>Note: models IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable) have same construction with IT-L9-5F-60W(Linkable) except dimension of product.</p> | <p style="text-align: center;">IT-L9-5F-60W</p>  <p>Note: models IT-L9-2F-20W, IT-L9-4F-40W, IT-L9-5F-50W have same construction with IT-L9-5F-60W except dimension of product.</p> |



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Detail construction for models IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W, IT-LTF-5F-60W

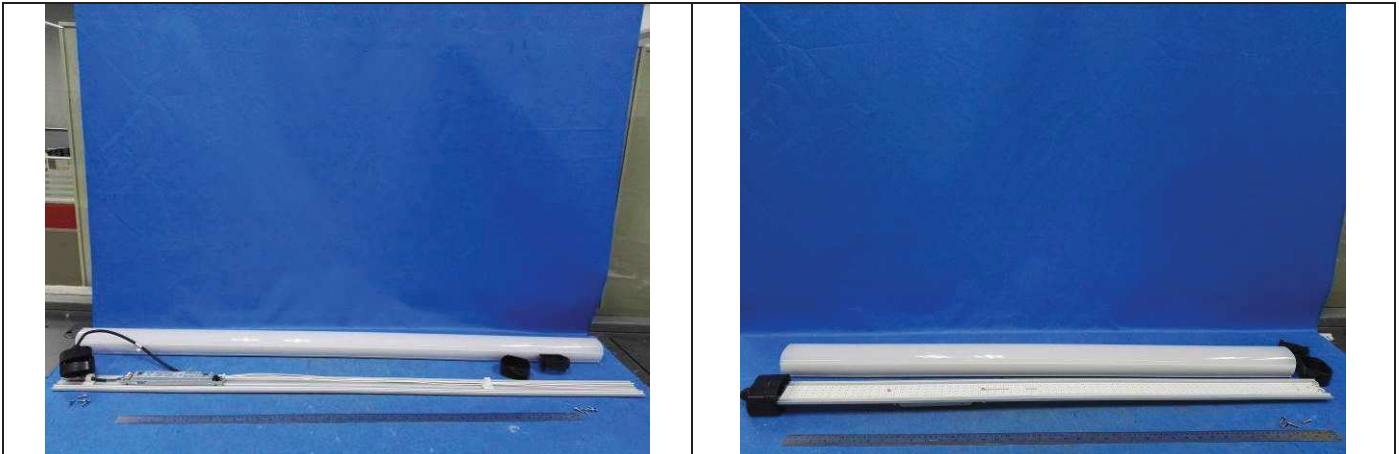
Note: models IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W, IT-LTF-5F-60W are the same, the major difference among them are the model no., dimension, wattage and LED quantity.





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Detail construction for models IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-LTF-5F-60W(Linkable)

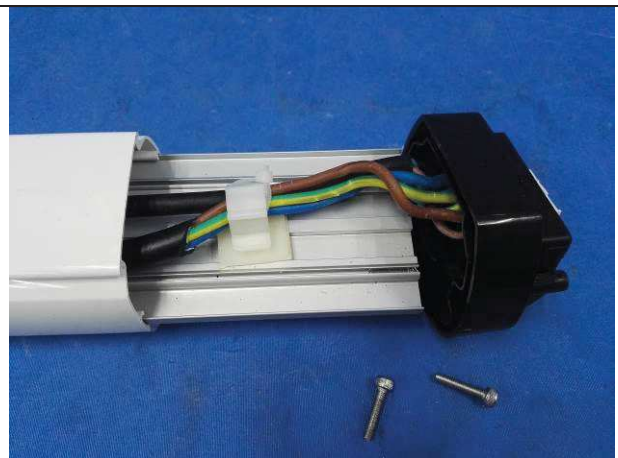
Note: models IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-LTF-5F-60W(Linkable) are the same, the major difference among them are the model no., dimension, wattage and LED quantity.



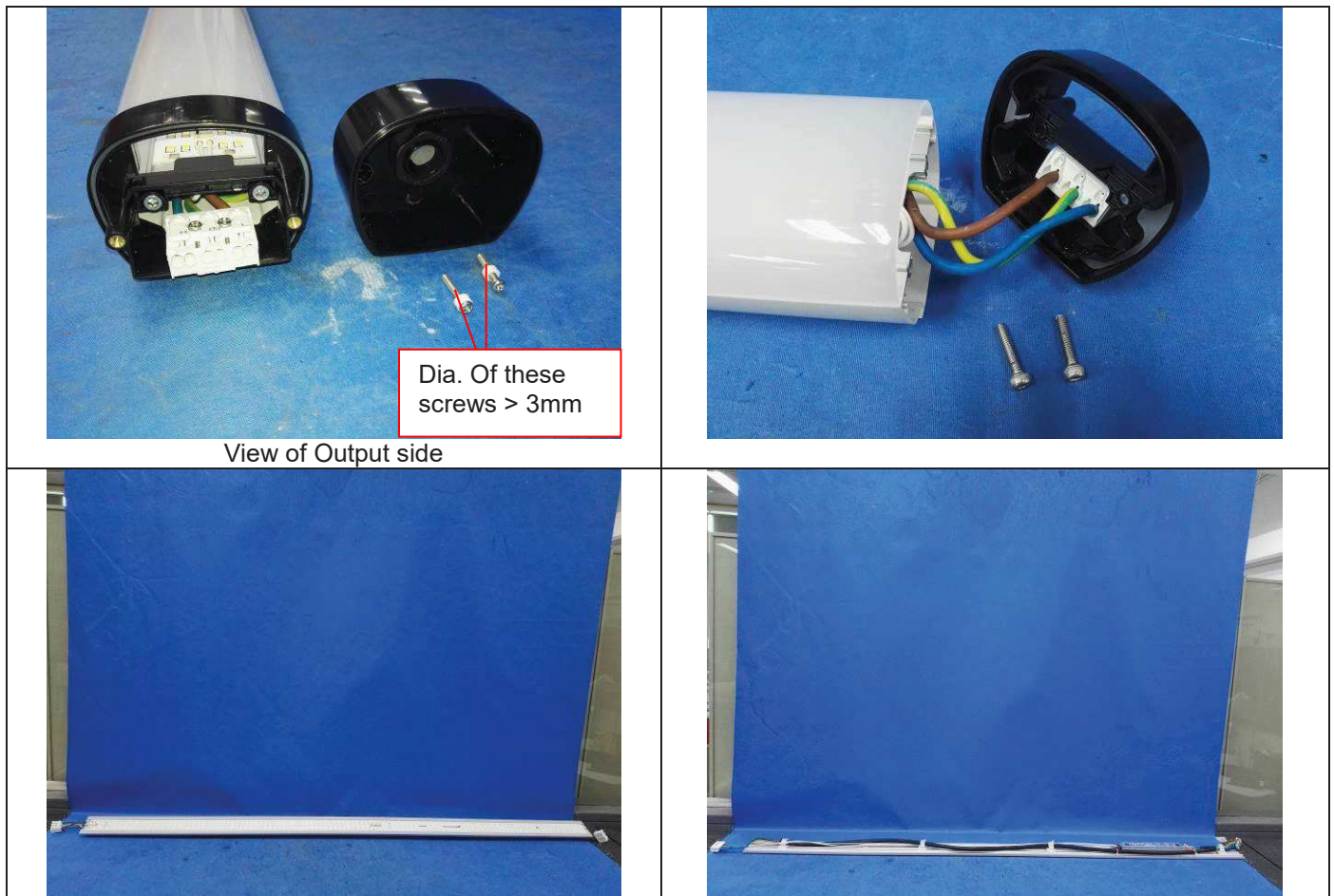
View of input side



Dia. Of these screws > 3mm



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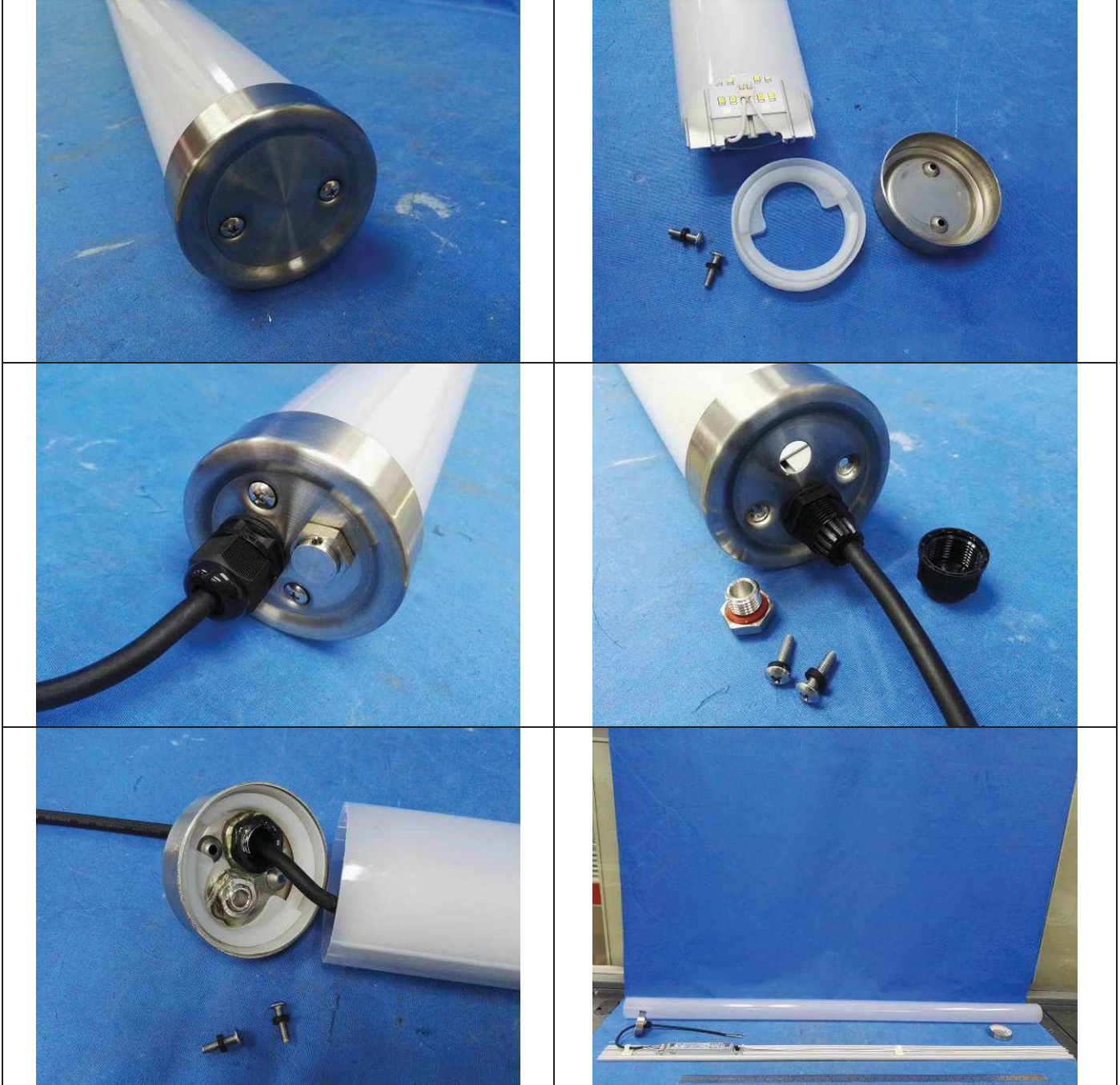


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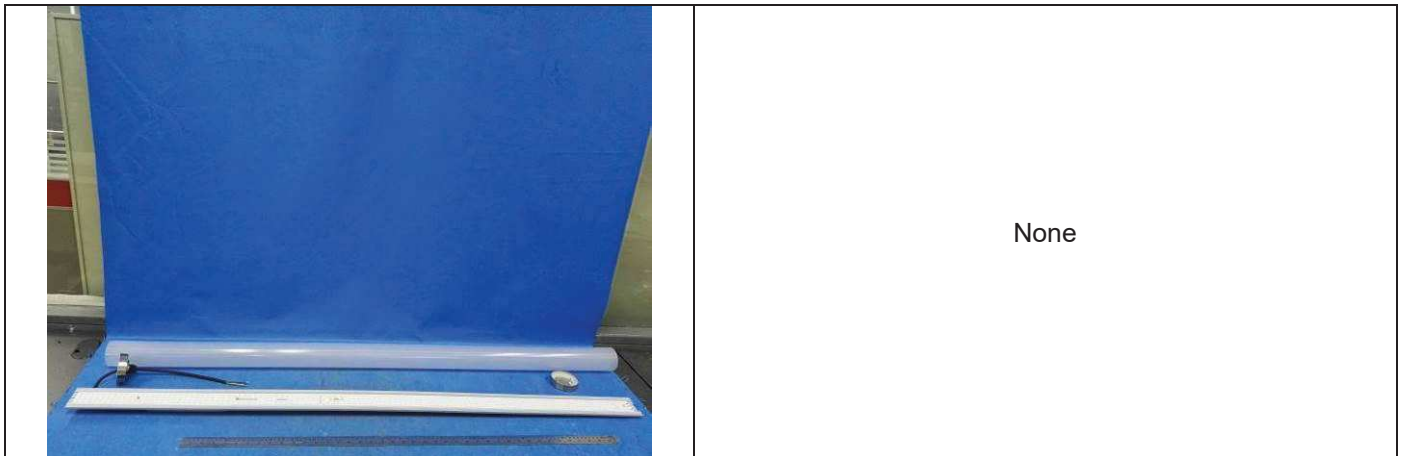
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Detail construction for models IT-L9-2F-20W, IT-L9-4F-40W, IT-L9-5F-50W, IT-L9-5F-60W

Note: models IT-L9-2F-20W, IT-L9-4F-40W, IT-L9-5F-50W, IT-L9-5F-60W are the same, the major difference among them are the model no., dimension, wattage and LED quantity.

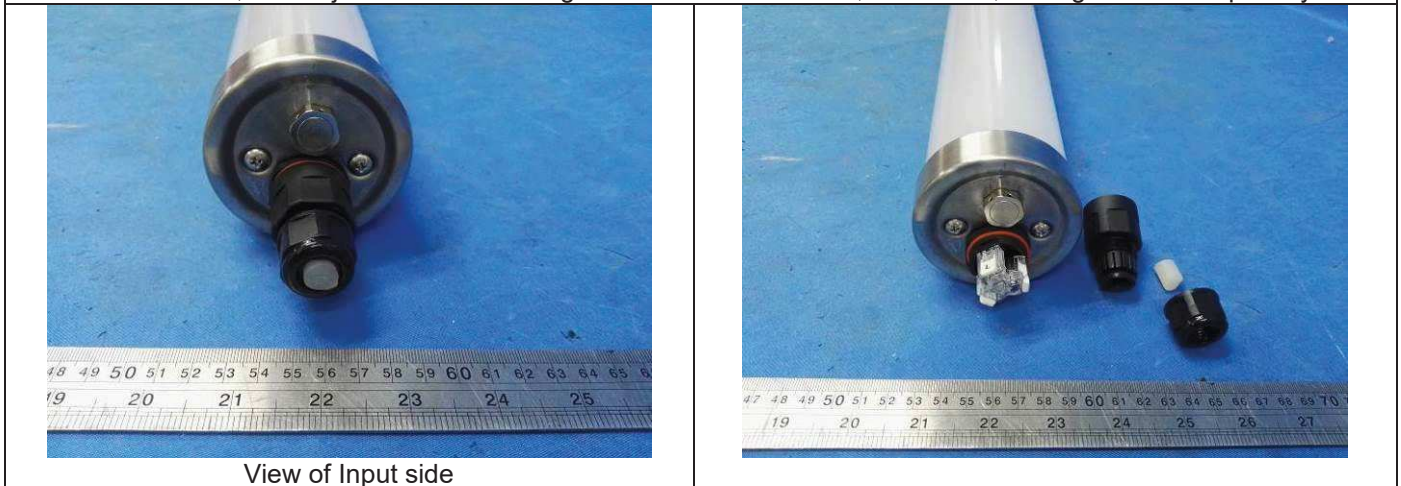


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Detail construction for models IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable)

Note: models IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable) are the same, the major difference among them are the model no., dimension, wattage and LED quantity.



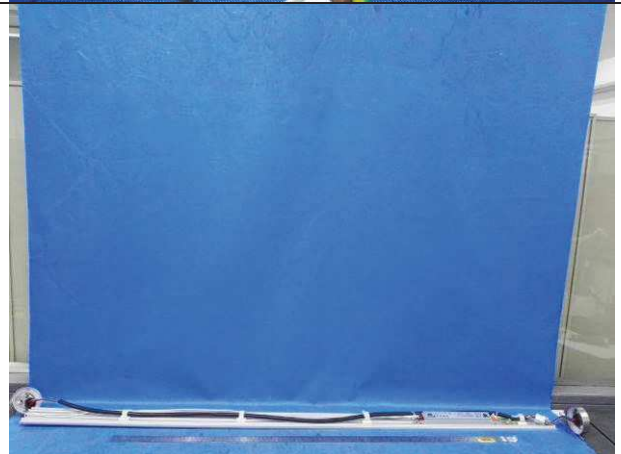


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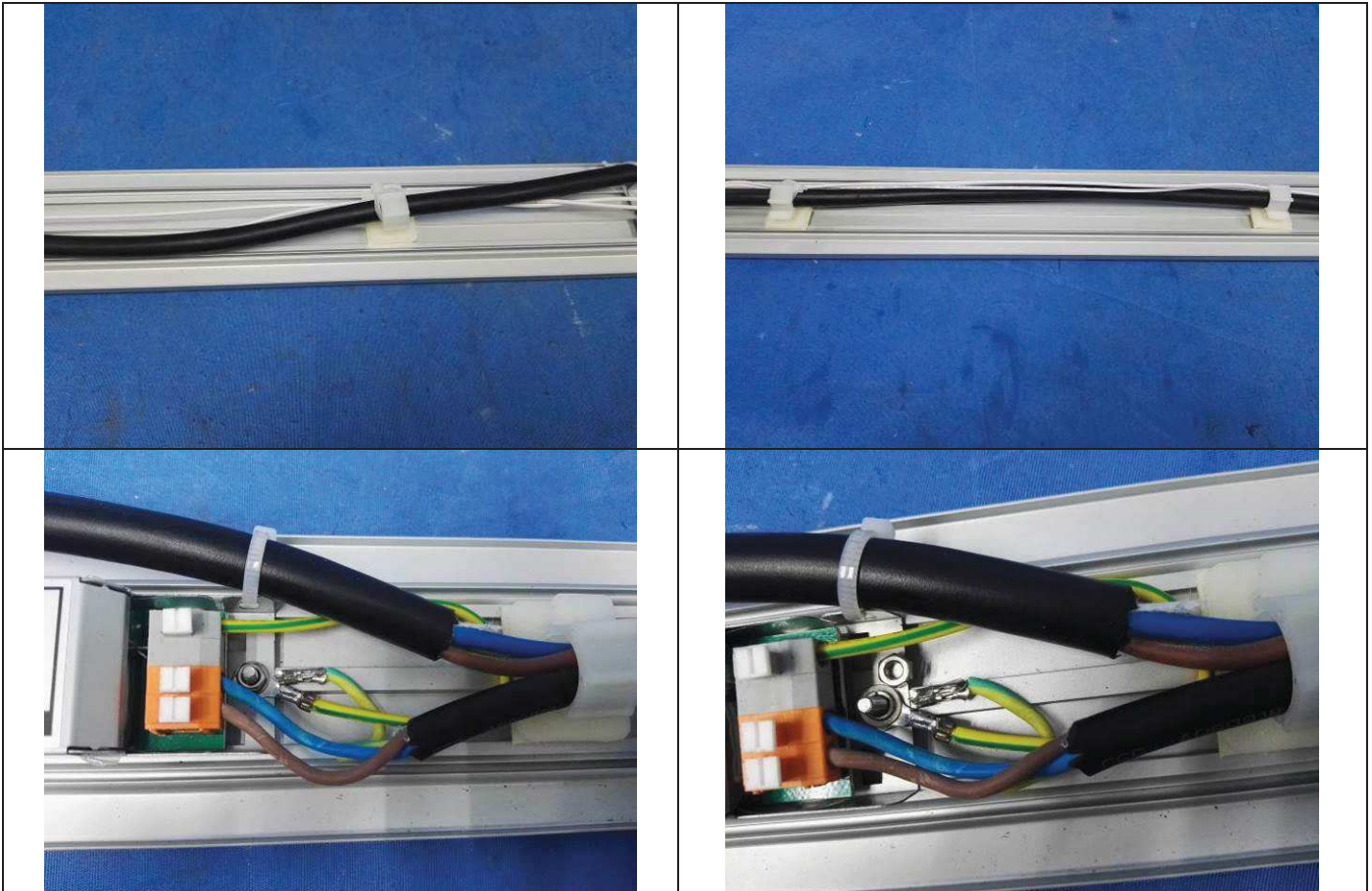
View of Output side





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Detail construction for all models





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| | |
|---|-------------|
| | |
| | <p>None</p> |
| <p>The lighting fixtures for all models</p> | |
| | |



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| DESCRIPTION | |
|---|--|
| Trademark: | |
| Type of light source | Non-user replaceable LED light sources |
| Type of appliance: | Fixed luminaire |
| Type / model: | See model list on page 3 |
| Color of enclosure: | See picture on page 6 to 14 |
| Rated Voltage (V): | 220-240 V |
| Nature of supply: | ~ |
| Rated power (W) | Details see model list on page 3 |
| Class of protection against electrical shock: | Class I |
| Degree of protection against moisture: | IP65 |
| CE marking: | Present |
| Type of switch: | NA |
| Type of fixation (X, Y, M, Z): | NA |
| Marking on knobs: | NA |
| Supply connection: | Terminal block for interconnected luminaires Lead wire(tail) for Non- interconnected luminaires |
| Other information about appliance: | NA |
| Accessory provided with the luminaire: | Instruction sheet |

| Possible test case verdicts: | |
|--|---------------------|
| - Test object does meet the requirement | P (Pass) |
| - Test case does not apply to the test object | NA (Not applicable) |
| - Test object does not meet the requirement | F (Fail) |
| - Test object does not demand | ND (Not demanded) |
| General remarks: | |
| <p>"(See remark #)" refers to a remark appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> | |

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| EN 60598-1 | | | |
|------------|---|-------------------------|---------|
| Section | Requirement Test | Result – Value – Remark | Verdict |
| 0 | COMPONENTS OF LUMINAIRES | | P |
| | Components comply with the requirements of the relevant standards (see page 23-25/35) | | P |
| 2 | CLASSIFICATION | | P |
| | . Compliance of the classification | | P |
| 3 | MARKING | | P |
| | . Marking on the luminaires | | P |
| | . Other requirements | | P |
| 4 | CONSTRUCTION | | P |
| 4.2 | - Replaceable components | | NA |
| 4.3 | - Wire ways | | P |
| 4.4 | - Lamp holders | | NA |
| 4.5 | - Starter holders | | NA |
| 4.6 | - Terminal blocks | | NA |
| 4.7 | - Terminals and supply connections | | P |
| 4.8 | - Switch | | NA |
| 4.9 | - Insulating linings and sleeves | | P |
| 4.10 | - Double and reinforced insulation | | NA |
| 4.11 | - Electrical connections and current-carrying parts | | P |
| 4.12 | -Screws and connections (mechanical), glands | | P |
| 4.13 | - Mechanical strength | | P |
| 4.14 | - Suspensions and adjusting devices (1) | | P |
| 4.15 | - Flammable materials | | P |
| 4.16 | - Luminaires for mounting on normally flammable surfaces | | P |
| 4.17 | - Drain holes | | NA |
| 4.18 | - Resistance to corrosion | | NA |
| 4.19 | - Ignitors | | NA |
| 4.20 | - Rough service luminaires | | NA |
| | - Vibrations requirements | | NA |
| 4.21 | - Protective shield | | NA |
| 4.22 | - Attachments to lamps | | NA |
| 4.23 | - Semi- luminaires | | NA |
| 4.24 | - Photobiological hazards | GR0 | P |
| 4.25 | - Mechanical hazard | | P |
| 4.26 | - Short-circuit protection | | NA |
| 4.27 | - Terminal blocks with integrated screwless earthing contacts | | NA |
| 4.28 | Fixing of thermal sensing controls | | NA |
| 4.29 | Luminaire with non-replaceable light source | | NA |
| 4.30 | Luminaires with non-user replaceable light | | P |

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| EN 60598-1 | | | |
|--|---|--|---------|
| Section | Requirement Test | Result – Value – Remark | Verdict |
| | sources | | |
| 4.31 | Insulation between circuits | | P |
| 4.32 | Overvoltage protective devices | | NA |
| 1. Frequently adjusted [] occasionally adjusted [] adjusted during installation only [] | | | |
| 11 | CREEPAGE DISTANCES AND CLEARANCES | | P |
| | Minimum distances (mm) | | P |
| | Basic insulation for SELV 1,2 - 0,2 | Pass the electrical strength test of table 10.2 (500V) | P |
| | Basic insulation 2,5 - 1,5 | | P |
| | Supplementary insulation 2,5 - 1,5 | | P |
| | Reinforced insulation 5,0 - 3,0 | | P |
| 7 | PROVISION FOR EARTHING | | P |
| | . No provision for class II and class III appliances | | P |
| | . Earthing connections of low resistance | | P |
| | - Test: >10A, <12V – Result: R<0,5Ω | | P |
| | . Other requirements | | P |
| 14 | SCREW TERMINALS | | NA |
| | . Compliance with the requirements of relevant standards | | NA |
| | . Compliance with the requirements of this section | | NA |
| 15 | SCREWLESS TERMINALS AND ELECTRICAL CONNECTIONS | | P |
| | . Compliance with the requirements of relevant standards | Approved terminal block | P |
| | . Compliance with the requirements of this section | | NA |
| 5 | EXTERNAL AND INTERNAL WIRING | | P |
| 5.2 | . Supply connection and other external wiring | | P |
| 5.3 | . Internal wiring | | P |
| 8 | PROTECTION AGAINST ELECTRIC SHOCK | | P |
| | . Live parts not accessible | | P |
| | . Other requirements | | P |
| 12 | ENDURANCE TEST AND THERMAL TEST | | P |
| 12.3 | - Endurance test | | P |
| | . ta = 55°C [X] - ta = 25°C [] | | P |
| | . U = 1,05 U to Pn [] - P = 1,05 Pn [] - U = 1,1 Un [X] | | P |
| | . 10 cycles [X] - 7 cycles [] | | P |
| | . Results | | P |
| 12.4 | - Thermal test (normal operation) | | P |
| | . ta = 45°C | | P |
| | . P = 1,05 Pn [] - U = 1,0 Un puis 1,06 Un [] - U = 1,06 Un [X] | | P |
| | . Results (below) | Interconnecting Max. wattage | P |

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|------------|------------------|-------------------------|---------|
| EN 60598-1 | | | |
| Section | Requirement Test | Result – Value – Remark | Verdict |

| PARTS | N A | Maximum temperature specified (°C+5°C) | Maximum temperature measured (°C) | |
|--|--------|--|--------------------------------------|----------------------------|
| | | | IT-LTF-5F- 60W(Linkable) | IT-L9-5F- 60W(Linkable) |
| . Lamps caps | X | | | |
| . Ballast winding: | X | | | |
| - tw 130 | X | | | |
| - tw | X | | | |
| . Transformer winding: | | | | |
| - Class H | X | | | |
| - Class | X | | | |
| . Case: | X | | | |
| - Of capacitor | X | | | |
| - Of starting device | X | | | |
| - Of ballast | X | | | |
| - Of Tc of LED driver @ 240V | | 90 | 89 | 89 |
| . Insulation of wiring not stressed (mechanical stress): | | | | |
| - PVC (external) supply cord | | 90 | 69 | 59 |
| - PVC (internal) through wire | | 90 | 72 | 73 |
| - PVC (internal) input wire of LED module | | 90 | 77 | 73 |
| - PVC with sleeve | X | | | |
| - Silicone [] -glassfibre [] | X | | | |
| -PTFE | X | | | |
| . Insulation of wiring stressed (mechanical stress): | X | | | |
| - PVC | X | | | |
| - Silicone [] -glassfibre [] | X | | | |
| . Heat-resisting sleeves | X | | | |
| . Contacts of ceramic lampholders | X | | | |
| . Insulating material | X | | | |
| - Of lampholder | X | | | |
| - Of starter holder | X | | | |
| . Switches | X | | | |
| . Insulating materials retaining current-carrying parts in position(Terminal block) | | 110 | 89 | 76 |
| . Insulating materials retaining current-carrying parts in position(connector in LED module) | | (1) | 73 | 73 |
| . Insulating materials providing protection against electric shock | X | | | |
| . Mounting surface | | 90 | 54 | 51 |
| . Means of adjustment | X | | | |
| . Means of adjustment's surrounding space | X | | | |
| . Objects lighted (d =0,1 m) | | 90 | 57 | 50 |
| . Test recess | X | | | |
| . Track | X | | | |

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| EN 60598-1 | | | |
|------------|------------------|-------------------------|---------|
| Section | Requirement Test | Result – Value – Remark | Verdict |

| PARTS | NA | Maximum temperature specified (°C+5°C) | Maximum temperature measured (°C) | |
|---|----|--|-----------------------------------|------------------------|
| | | | IT-LTF-5F-60W(Linkable) | IT-L9-5F-60W(Linkable) |
| . Mains socket-outlet-mounted-luminaire and plug-ballast-transformer: | X | | | |
| - Case intended to be gripped by hand | X | | | |
| - Plug-socket interface | X | | | |
| - Other parts | X | | | |
| . Wood | X | | | |
| . Other requirements | | | | |
| LED | | (1) | 86 | 88 |
| LED module PCB | | (1) | 77 | 74 |
| Translucent lens | | (1) | 67 | 56 |

(1) No limit is specified, but these materials must satisfy the tests of section 13

Note: Thermal test (normal operation) of models IT-LTF-5F-60W(Linkable) and IT-L9-5F-60W(Linkable) in normal use with P_{Max}: 3000W loading.

| PARTS | NA | Maximum temperature specified (°C+5°C) | Maximum temperature measured (°C) | | |
|------------------------------|----|--|-----------------------------------|---------------|---------------|
| | | | IT-LTF-20W | IT-LTF-4F-40W | IT-LTF-5F-50W |
| - Of Tc of LED driver @ 240V | | 90 | 76 | 82 | 88 |

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| | | | |
|------------|------------------|-------------------------|---------|
| EN 60598-1 | | | |
| Section | Requirement Test | Result – Value – Remark | Verdict |

| | | | |
|-------------|--|--|----|
| 12.5 | - Thermal test (abnormal operation) | | P |
| | . ta = 25°C | | P |
| | . P = 1,05 Pn [] - U = 1,1 Un [X] -U = 1,06 Un [] | | P |
| | . Abnormal circuit condition applied: | | P |
| | - Short-circuit of starter contacts [] | | NA |
| | - Overturning [] | | NA |
| | - Unfavorable adjusting to the lighted surface [] | | NA |
| | - Secondary circuit short-circuited [X] | | P |
| | - Other condition [X] : short-circuit one LED and short-circuit LED driver | | P |
| | . Results (below) | | P |

(**) The samples were stable to 15°

| PARTS | NA | Maximum temperature specified (°C+5°C) | Maximum temperature measured (°C) | |
|---|----|--|-----------------------------------|------------------------|
| | | | IT-LTF-5F-60W(Linkable) | IT-L9-5F-60W(Linkable) |
| . Ballast winding: | X | | | |
| - tw 130 | X | | | |
| - tw | X | | | |
| . Transformer winding: | X | | | |
| - Class H | X | | | |
| - Class | X | | | |
| . Case of capacitor | X | | | |
| . Mounting surface [X] | | 130 | 54 | 50 |
| . Lighted surface [X] | | 175 | 57 | 51 |
| . Test recess | X | | | |
| . Track | X | | | |
| . Mains socket-outlet-mounted-luminaires and plug-ballast case parts intended to be gripped by hand | X | | | |
| Transformer case parts intended to be gripped by hand | X | | | |

TEST REPORT N°: ASCV-19SE1310LTSZP

| EN 60598-1 | | | |
|-------------|--|-------------------------|---------------------|
| Section | Requirement Test | Result – Value – Remark | Verdict |
| 12.6 | - Thermal test (failed lamp control gear conditions) | | NA |
| | . ta = 25°C | | NA |
| 12.6.1 | - Ballast/transformer without thermal cut-outs: | | NA |
| | . Abnormal condition applied: | | NA |
| | - Lamp not start [] | | NA |
| | - Other condition [] : | | NA |
| | . Results (below): | | NA |
| | - T° of mounting surface 180°C for T° winding = 350°C | | NA |
| | Supply voltage | Temperatures (°C) | |
| | | Of ballast winding | Of mounting surface |
| | 0,9 Un | -- | -- |
| | 1,0 Un | -- | -- |
| | 1,1 Un | -- | -- |
| 12.6.2 | - Ballast/transformer with thermal cut-outs: | | NA |
| | . Abnormal condition applied: | | NA |
| | - Lamp not start [] | | NA |
| | - Other condition [] : | | NA |
| | . Results: | | NA |
| | - T° mounting surface 135°C (110°C) | | NA |
| 12.7 | Thermal test (fault conditions in lamp controlgear or electronic devices in plastic luminaires) | | NA |
| 9 | RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE | | P |
| 9.2 | - Tests for ingress, | IP65 | P |
| | . Of solid objects IP3X [] - 4X [] | | NA |
| | . Of dust IP5X [] - 6X [X] | IP6X | P |
| | . Of moisture IPX1 []- IPX2 [] - X3 [] - X4 [] - X5[X] - X6 [] - X7 [] - X8 [] | IPX5 | P |
| 9.3 | - Humidity test | 48 hours, 93 %, 25 °C | P |

TEST REPORT N°: ASCV-19SE1310LTSZP

| EN 60598-1 | | | |
|------------|--|---|----------------------|
| Section | Requirement Test | Result – Value – Remark | Verdict |
| 10 | INSULATION RESISTANCE AND ELECTRIC STRENGTH | | P |
| 10.2 | Insulation | Insulation resistance | Electric strength |
| | Basic | $\geq 1 \text{ M}\Omega$ [X] $\geq 2 \text{ M}\Omega$ [X] | 500 V [X] 1480 V [X] |
| | Reinforced | $\geq 4 \text{ M}\Omega$ [] | 2960 V [] |
| | Supplementary | $\geq 2 \text{ M}\Omega$ [] | 1480 V [] |
| | . Results | | P |
| | - Parts stressed by the pulse voltage | | NA |
| 10.3 | - Touch current | | NA |
| | - Protective conductor current | Max.0,05 mA (Limit: 3,5 mA peak) | P |
| 13 | RESISTANCE TO HEAT, FIRE AND TRACKING | | P |
| 13.2 | - Resistance to heat | | P |
| | . Ball pressure test | Translucent lens and enclosure: 92 °C | P |
| 13.3 | - Resistance to flame and ignition | | P |
| | . Needle-flame test | Connector in LED module | P |
| | . Glow-wire test 850°C | Translucent lens and enclosure | P |
| 13.4 | - Resistance to tracking | | NA |
| | REQUIREMENTS STANDARD EN 60598-2-1 | | P |
| | REQUIREMENTS STANDARD EN 62031 | | P |
| | REQUIREMENTS STANDARD EN 62493 | | P |

TEST REPORT N°: ASCV-19SE1310LTSZP

| | | | |
|------------|------------------|-------------------------|---------|
| EN 60598-1 | | | |
| Section | Requirement Test | Result – Value – Remark | Verdict |

Components list:

| Object/part No. | Manufacturer/trademark | Type/model | Technical data | Mark(s) of conformity | 1 | 2 | 3 | R |
|------------------------------------|------------------------|----------------|--|-----------------------|---|---|---|---|
| LED driver | | BK-CHL024-0550 | Input: 220-240 V~, 50/60Hz, 0,15A Max.; Output: 30-42Vdc, 550mA, 23,1W Max. Uo: 60Vdc Max., ta: 60°C, tc: 90°C; Class I, built-in, SELV | TUVSUD | X | | | |
| LED driver | | BK-CHL042-1050 | Input: 220-240 V~, 50/60Hz, 0,25A Max.; Output: 30-40Vdc, 1050mA, 42W Max. Uo: 60Vdc Max., ta: 60°C, tc: 90°C; Class I, built-in, SELV | TUVSUD | X | | | |
| LED driver | | BK-CHL050-1250 | Input: 220-240 V~, 50/60Hz, 0,4A Max.; Output: 30-42Vdc, 1.25A, 52,5W Max. UMax.: 63Vdc Max., ta: 55°C, tc: 90°C; Class I, built-in, SELV | TUVSUD | X | | | |
| LED driver | | BK-CHL060-1500 | Input: 220-240 V~, 50/60Hz, 0,45A Max.; Output: 30-40Vdc, 1.5A, 60W Max. UMax.: 63Vdc Max., ta: 55°C, tc: 90°C; Class I, built-in, SELV | TUVSUD | X | | | |
| Supply cord (for Non-interconnect) | | H05RN-F | 3 x 1,0 mm ² | VDE | X | | | |
| Input wire of LED module | | H05V-U | 1 x 0,5 mm ² | VDE | X | | | |



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| EN 60598-1 | | | |
|------------|------------------|-------------------------|---------|
| Section | Requirement Test | Result – Value – Remark | Verdict |

| Object/part No. | Manufacturer/trademark | Type/model | Technical data | Mark(s) of conformity | 1 | 2 | 3 | R |
|--|------------------------|------------|-------------------------|-----------------------|---|---|---|---|
| Through wire (For IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-LTF-5F-60W(Linkable), IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable)) | | H07RN-F | 3 x 2,5 mm ² | VDE | X | | | |
| Terminal block (for IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W, IT-LTF-5F-60W, IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-LTF-5F-60W(Linkable), IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable)) | | 863 | 450 V~, 16 A, T110 | ENEC25 | X | | | |

TEST REPORT N°: ASCV-19SE1310LTSZP

| EN 60598-1 | | | | | | | | |
|--|------------------------|--------------------------|---|-----------------------|---|---|---------|---|
| Section | Requirement Test | Result – Value – Remark | | | | | Verdict | |
| Object/part No. | Manufacturer/trademark | Type/model | Technical data | Mark(s) of conformity | 1 | 2 | 3 | R |
| Connector (For IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable)) | | XY22M, XY22F | 250 V~, 16 A | TUVRheinland | X | | | |
| Connector in LED module | | 2062-2P | - | Tested with appliance | | | X | |
| LED PCB | | CY-AL-P01 | V-0, 90 °C, E353472 | Tested with appliance | | | X | |
| Plastic enclosure and Translucent lens | | M7025L2 | V-2, 80 °C, E53664 | Tested with appliance | | | X | |
| Rubber gasket for waterproof | | YY-4153 | - | Tested with appliance | | | X | |
| LED | | HL-A-2835H421W-S1-08-HR3 | Vf: 2,8-3,4 V, If: 60 mA, CCT: 4000 K, 5000 K, 6000 K | Tested with appliance | | | X | |

- (1) This component bears the stamp of a European conformity mark or has been granted a certificate of conformity.
- (2) Applicable specific rules do not exist for this component; consequently, it has been tested according to the requirements of appropriate clauses of applied documents and is satisfactory.
- (3) This component has been tested according to the requirements of appropriate clauses of applied documents and is satisfactory.

TEST REPORT N°: ASCV-19SE1310LTSZP

Annex 1: (instruction sheet)

For models IT-LTF-20W(Linkable), IT-LTF-4F-40W(Linkable), IT-LTF-5F-50W(Linkable), IT-LTF-5F-60W(Linkable)



General Description

IP65 fast install LED Tri-proof Light are an ideal solution for both wet and dry locations such as parking garages and warehouses as well as factory production areas, basements and storage areas. They are available in lengths from 600mm to 1500mm 20W/ 40W/50W/60W with both surface mount and suspended mount options.

Features

- **Fast Fit Easy Install**
- System efficiency up to **130lm/W & 150lm/W**
- High CRI >80
- UGR<19 options
- Environmentally friendly, no mercury, No UV, No IR
- Wide beam angle 120°
- IP65 waterproof, dust, corrosion and pressure-proof; for indoor use
- Energy Efficiency Grade: A+
- Quick Start instant 100% luminous flux
- PC housing + PC cover+ Aluminium inside
- 5 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- Certificate: CE, RoHS Certified
- Surface Mount or Suspended

Applications

- Car parking Lighting
- School Lighting
- Workshops
- Supermarket
- Warehouse
- Storage



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TEST REPORT N°: ASCV-19SE1310LTSZP

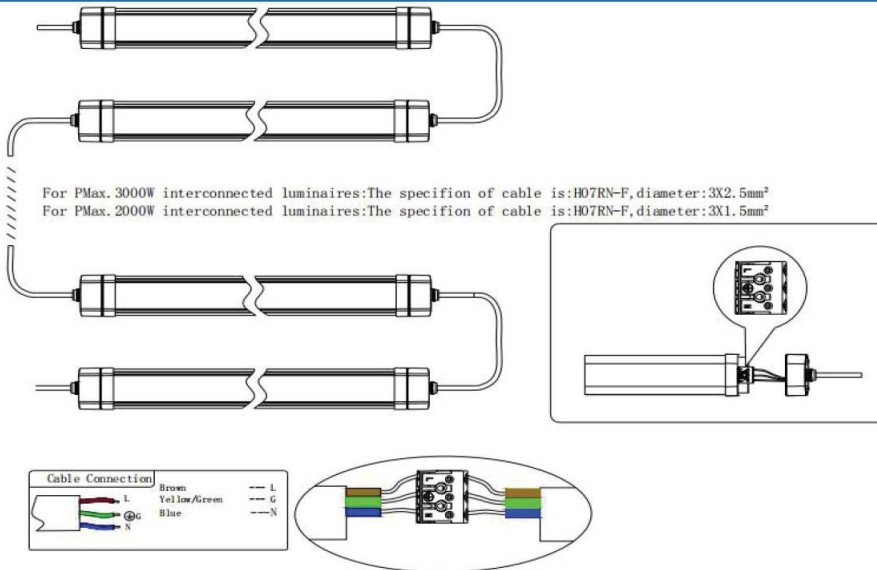
Electrical and Technical Data

| Model No | IT-LTF-20W (Linkable) | IT-LTF-4F-40W (Linkable) | IT-LTF-5F-50W (Linkable) | IT-LTF-5F-60W (Linkable) |
|---------------|------------------------|--------------------------|--------------------------|--------------------------|
| Input Power | 20W | 40W | 50W | 60W |
| Dimension | 623*75*60mm | 1223*75*60mm | 1523*75*60mm | 1523*75*60mm |
| CCT | 4000K & 5000K & 6000K | | | |
| CRI | >80 | | | |
| Power Factor | >0.9 | | | |
| Input Voltage | AC220-240VAC (50/60Hz) | | | |
| Luminous | 130lm/W or 150lm/w | | | |
| Beam Angle | 120° | | | |
| Working Temp | -40°~45° C | | | |
| Warranty | 5 Years | | | |
| L90 | >54,000hrs | | | |

Product Dimension&Package Details

| Model | L(Norm) | W(Norm) | H(Norr N.W/CTN) | G.W/CTN | Qty/CTN | Size/CTN |
|--------------------------|---------|---------|-----------------|---------|----------|----------------|
| IT-LTF-20W (Linkable) | 623mm | 75mm | 10.0KG | 12.0KG | 9PCS/CTN | 720*270*230mm |
| IT-LTF-4F-40W (Linkable) | 1223mm | 75mm | 14.0KG | 16.0KG | 9PCS/CTN | 1320*270*230mm |
| IT-LTF-5F-50W (Linkable) | 1523mm | 75mm | 18.0KG | 20.0KG | 9PCS/CTN | 1620*270*230mm |
| IT-LTF-5F-60W (Linkable) | 1523mm | 75mm | 18.0KG | 20.0KG | 9PCS/CTN | 1620*270*230mm |

Linkable Installation





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VERITAS**

TEST REPORT N°: ASCV-19SE1310LTSZP



- 1.The luminaire shall be installed by a qualified electrician and wired in accordance with the latest IEE electrical regulations or the national requirements.
- 2.Do not switch on before complete installation.
3. Ta-40~45°C
- 4.The light source contained in this luminaire shall only be replaced by the manufacturer or his service
- 5.The wiring connection shall be done with IP65 connection box(or higher IP rating)





**BUREAU
VERITAS**

TEST REPORT N°: ASCV-19SE1310LTSZP

For models IT-LTF-20W, IT-LTF-4F-40W, IT-LTF-5F-50W, IT-LTF-5F-60W



General Description

IP65 fast install LED Tri-proof Light are an ideal solution for both wet and dry locations such as parking garages and warehouses as well as factory production areas, basements and storage areas. They are available in lengths from 600mm to 1500mm 20W/ 40W/50W/60W with both surface mount and suspended mount options.

Features

- **Fast Fit Easy Install**
- System efficiency up to **130lm/W & 150lm/W**
- High CRI >80
- UGR < 19 options
- Environmentally friendly, no mercury, No UV, No IR
- Wide beam angle 120°
- IP65 waterproof, dust, corrosion and pressure-proof; for indoor use
- Energy Efficiency Grade: A+
- Quick Start instant 100% luminous flux
- PC housing + PC cover + Aluminium inside
- 5 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- Certificate: CE, RoHS Certified
- Surface Mount or Suspended

Applications

- Car parking Lighting
- School Lighting
- Workshops
- Supermarket
- Warehouse
- Storage



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VERITAS**

TEST REPORT N°: ASCV-19SE1310LTSZP

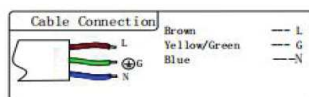
Electrical and Technical Data

| Model No | IT-LTF-20W | IT-LTF-4F-40W | IT-LTF-5F-50W | IT-LTF-5F-60W |
|---------------|------------------------|---------------|---------------|---------------|
| Input Power | 20W | 40W | 50W | 60W |
| Dimension | 623*75*60mm | 1223*75*60mm | 1523*75*60mm | 1523*75*60mm |
| CCT | 4000K & 5000K & 6000K | | | |
| CRI | >80 | | | |
| Power Factor | >0.9 | | | |
| Input Voltage | AC220-240VAC (50/60Hz) | | | |
| Luminous | 130lm/W or 150lm/w | | | |
| Beam Angle | 120° | | | |
| Working Temp | -40°~45° C | | | |
| Warranty | 5 Years | | | |
| L90 | >54,000hrs | | | |

Product Dimension&Package Details

| Model | L(Norm) | W(Norm) | H(Norr N.W/CTN) | G.W/CTN | Qty/CTN | Size/CTN |
|---------------|---------|---------|-----------------|---------|----------|----------------|
| IT-LTF-20W | 623mm | 75mm | 60mm 10.0KG | 12.0KG | 9PCS/CTN | 720*270*230mm |
| IT-LTF-4F-40W | 1223mm | 75mm | 60mm 14.0KG | 16.0KG | 9PCS/CTN | 1320*270*230mm |
| IT-LTF-5F-50W | 1523mm | 75mm | 60mm 18.0KG | 20.0KG | 9PCS/CTN | 1620*270*230mm |
| IT-LTF-5F-60W | 1523mm | 75mm | 60mm 18.0KG | 20.0KG | 9PCS/CTN | 1620*270*230mm |

Single Installation





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TEST REPORT N°: ASCV-19SE1310LTSZP

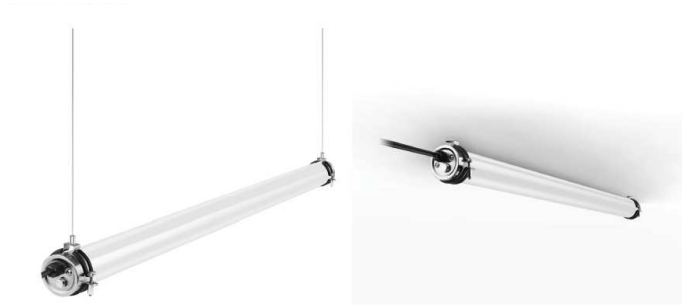


- 1.The luminaire shall be installed by a qualified electrician and wired in accordance with the latest IEE electrical regulations or the national requirements.
- 2.Do not switch on before complete installation.
3. Ta-40~45 °C
- 4.If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.
- 5.The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
- 6.Terminal block not included. Installation may require advice from a qualified person.
The terminal block shall conform to IEC 60998-2-1
Screw type of terminal block:M3x4
Number of terminals :3-way terminals
Rated voltage of terminal block:450V/16A
Min. torque for fixing plastic gland 3.25Nm
Rated connecting capacity :Suitable for wire with cross-sectional area of 1.5 sq.mm
- 8.The wiring connection shall be done with IP65 connection box(or higher IP rating)



TEST REPORT N°: ASCV-19SE1310LTSZP

For models IT-L9-2F-20W(Linkable), IT-L9-4F-40W(Linkable), IT-L9-5F-50W(Linkable), IT-L9-5F-60W(Linkable)



General Description

IP69K LED Tri-proof Light is an ideal solution for food processing and poultry lighting industry.

The IP69K is the highest level of this protection and is designed for applications where water jets are under high pressure and high temperature are used for specific wash-downs. This will also include special sensitization and chemical cleaning. In some instances, the cleaning process involves very intensive requirements for industries such as Food & Beverage as well as the vehicle industry.

Features

- IP69K
- PMMA IK06 / PC IK10
- Anti-ammonia
- Against water pressure of 100bar(1450psi) and temperature of 80°C
- System efficiency up to **130lm/W & 150lm/W option**
- High CRI >80
- **UGR<19 is available**
- DMX Function is available
- Environmentally friendly, no mercury, No UV, No IR
- Wide beam angle 120°
- Energy Efficiency Grade: A+
- Quick Start Instant 100% luminous flux
- 5 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- Certificate: CE,RoHS Certified
- Surface Mount or Suspended

Applications

- Food Processing
- Farm Lighting
- Poultry Lighting
- Paper Plant



BUREAU VERITAS

TEST REPORT N°: ASCV-19SE1310LTSZP

| Electrical and Technical Data | | | | | | | |
|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------|----------|----------------|
| Model No | IT-L9-2F-20W (Linkable) | IT-L9-4F-40W (Linkable) | IT-L9-5F-50W (Linkable) | IT-L9-5F-60W (Linkable) | | | |
| Input Power | 20W | 40W | 50W | 60W | | | |
| Dimension | 623 * Ø75mm | 1223 * Ø75mm | 1523 * Ø75mm | 1523 * Ø75mm | | | |
| CCT | 4000K & 5000K & 6000K | | | | | | |
| CRI | >80 | | | | | | |
| Power Factor | >0.9 | | | | | | |
| IP Grade | IP69K | | | | | | |
| Input Voltage | AC220-240VAC (50/60Hz) | | | | | | |
| Luminous | 130lm/W or 150lm/w | | | | | | |
| Beam Angle | 120° | | | | | | |
| Working Temp | -40°~45° C | | | | | | |
| Warranty | 5 Years | | | | | | |
| L90 | >54,000hrs | | | | | | |
| Product Dimension&Package Details | | | | | | | |
| Model | L(Norm) | W(Norm) | H(Norm) | N.W/CTN | G.W/CTN | Qty/CTN | Size/CTN |
| IT-L9-2F-20W (Linkable) | 623mm | 75mm | 60mm | 9KG | 15KG | 9PCS/CTN | 710*255*255mm |
| IT-L9-4F-40W (Linkable) | 1223mm | 75mm | 60mm | 19KG | 22KG | 9PCS/CTN | 1310*255*255mm |
| IT-L9-5F-50W (Linkable) | 1523mm | 75mm | 60mm | 15.5KG | 19KG | 6PCS/CTN | 1610*255*175mm |
| IT-L9-5F-60W(Linkable) | 1523mm | 75mm | 60mm | 15.5KG | 19KG | 6PCS/CTN | 1610*255*175mm |

Linkable Installation

For PMax.3000W interconnected luminaires:The specification of cable is:H07RN-F,diameter:3X2.5mm²

For PMax.2000W interconnected luminaires:The specification of cable is:H07RN-F,diameter:3X1.5mm²

| Cable Connection | |
|------------------|---|
| Brown | L |
| Blue | N |
| Yellow/Green | G |

Connector
 Brown Live
 Blue Null
 Yellow/Green Earth

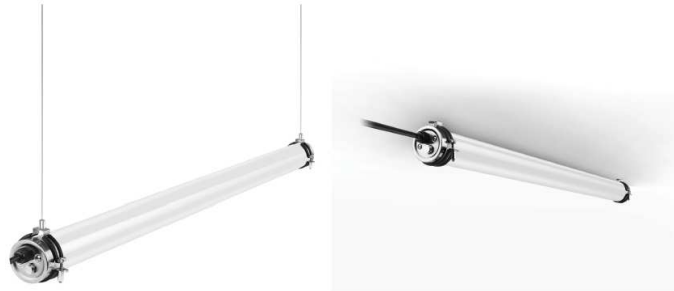
- The luminaire shall be installed by a qualified electrician and wired in accordance with the latest IEE electrical regulations or the national requirements.
- Do not switch on before complete installation.
- Ta=40~45°C
- The light source contained in this luminaire shall only be replaced by the manufacturer or his service
- The wiring connection shall be done with IP65 connection box(or higher IP rating)



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TEST REPORT N°: ASCV-19SE1310LTSZP

For models IT-L9-2F-20W, IT-L9-4F-40W, IT-L9-5F-50W, IT-L9-5F-60W



General Description

IP69K LED Tri-proof Light is an ideal solution for food processing and poultry lighting industry.

The IP69K is the highest level of this protection and is designed for applications where water jets are under high pressure and high temperature are used for specific wash-downs. This will also include special sensitization and chemical cleaning. In some instances, the cleaning process involves very intensive requirements for industries such as Food & Beverage as well as the vehicle industry.

Features

- IP69K
- PMMA IK06 / PC IK10
- Anti-ammonia
- Against water pressure of 100bar(1450psi) and temperature of 80°C
- System efficiency up to **130lm/W & 150lm/W option**
- High CRI >80
- **UGR<19 is available**
- DMX Function is available
- Environmentally friendly, no mercury, No UV, No IR
- Wide beam angle 120°
- Energy Efficiency Grade: A+
- Quick Start instant 100% luminous flux
- 5 Year Warranty on complete fixture. (LED's, Driver, & Housing)
- Certificate: CE, RoHS Certified
- Surface Mount or Suspended

Applications

- Food Processing
- Farm Lighting
- Poultry Lighting
- Paper Plant



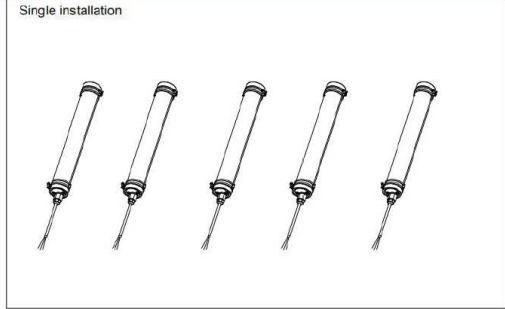
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TEST REPORT N°: ASCV-19SE1310LTSZP

| Electrical and Technical Data | | | | |
|-------------------------------|------------------------|--------------|--------------|--------------|
| Model No | IT-L9-2F-20W | IT-L9-4F-40W | IT-L9-5F-50W | IT-L9-5F-60W |
| Input Power | 20W | 40W | 50W | 60W |
| Dimension | 623 * Ø75mm | 1223 * Ø75mm | 1523 * Ø75mm | 1523 * Ø75mm |
| CCT | 4000K & 5000K & 6000K | | | |
| CRI | >80 | | | |
| Power Factor | >0.9 | | | |
| IP Grade | IP69K | | | |
| Input Voltage | AC220-240VAC (50/60Hz) | | | |
| Luminous | 130lm/W or 150lm/w | | | |
| Beam Angle | 120° | | | |
| Working Temp | -40°~45° C | | | |
| Warranty | 5 Years | | | |
| L90 | >54,000hrs | | | |

| Product Dimension&Package Details | | | | | | | |
|-----------------------------------|---------|---------|---------|---------|---------|----------|----------------|
| Model | L(Norm) | W(Norm) | H(Norm) | N.W/CTN | G.W/CTN | Qty/CTN | Size/CTN |
| IT-L9-2F-20W | 623mm | 75mm | 60mm | 9KG | 15KG | 9PCS/CTN | 710*255*255mm |
| IT-L9-4F-40W | 1223mm | 75mm | 60mm | 19KG | 22KG | 9PCS/CTN | 1310*255*255mm |
| IT-L9-5F-50W | 1523mm | 75mm | 60mm | 15.5KG | 19KG | 6PCS/CTN | 1610*255*175mm |
| IT-L9-5F-60W | 1523mm | 75mm | 60mm | 15.5KG | 19KG | 6PCS/CTN | 1610*255*175mm |

Single Installation



- The luminaire shall be installed by a qualified electrician and wired in accordance with the latest IEE electrical regulations or the national requirements.
 - Do not switch on before complete installation.
 - Ta=40-45°C
 - If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.
 - The light source contained in this luminaire shall only be replaced by the manufacturer or his service agent or a similar qualified person.
 - Terminal block not included. Installation may require advice from a qualified person.
- The terminal block shall conform to IEC 60998-2-1
Screw type of terminal block:M3x4
Number of terminals :3-way terminals
Rated voltage of terminal block:450V/16A
Min. torque for fixing plastic gland :3.25Nm
Rated connecting capacity :Suitable for wire with cross-sectional area of 1.5 sq.mm
8.The wiring connection shall be done with IP65 connection box(or higher IP rating)

SHENZHEN INNO-TECH LIGHTING CO.,LIMITED
 • www.itledlighting.com • info@itledlighting.com
 Address: No4.Huanping Road,Gaoqiao District,Pingdi Street,Longgang,Shenzhen,Guangdong,China.

Only markings in English Language present on the sample tested were checked and validated during this examination.
The text required by the standard should be translated into the official language of the country where the appliance will be sold.