



Center for Testing and European Certification

**LABORATORY FOR TESTING OF MACHINERY,
EQUIPMENT AND DEVICES
CENTER FOR TESTING AND EUROPEAN CERTIFICATION LTD**

2, Industrialna Str., Stara Zagora, Bulgaria, www.ctec-sz.com
Tel.: +359 42 620 368 Fax: +359 42 602 377 e-mail:ctec_limsu@abv.bg



Accredited certificate
№ 101 ЛИ / 24.11.2014
Valid until: 24.11.2018
of EA BAS, according
EN ISO/IEC 17025

TEST REPORT

№ 2e-14-1088 / 18.12.2014

OBJECT TO BE TESTED: Compact fluorescent lamp - CFL Model: Half Spiral/T5 - 45W, cat. No: 99210267
Model representative of: 2U/T3 -5W cat.№ 99200029; 2U/T3 -9W cat.№ 99200031; 2U/T3 -11W cat.№ 99200034; 2U/T3 -11W cat.№ 99200035; 3U/T2 -7W cat.№ 99216165; 3U/T2 -11W cat.№ 99216167; 3U/T3 -15W cat.№ 99200036; 3U/T3 -15W cat.№ 99200037; 3U/T4 -18W cat.№ 99200038; 3U/T42 -18W cat.№ 99200039; 3U/T4 -20W cat.№ 99200040; 3U/T4 -20W cat.№ 99200041; 3U/T4 -26W cat.№ 99200042; 3U/T4 -26W cat.№ 99200043; 4U/T2 -15W cat.№ 99216169; 4U/T3 -20W cat.№ 99216171; 4U/T3 -23W cat.№ 99216172; 4U/T4 -32W cat.№ 99200044; Full Spiral D2 -5W cat.№ 99210047; Full Spiral D2-9W cat.№ 99210049; Full Spiral D2 -11W cat.№ 99210052; Full Spiral D2 -11W cat.№ 99210053; Full Spiral D2 -15W cat.№ 99210054; Full Spiral D2 -15W cat.№ 99210055; Full Spiral D2 -20W cat.№ 99210056; Full Spiral D2 -20W cat.№ 99210057; Full Spiral D2 -24W cat.№ 99210058; Full Spiral D2 -24W cat.№ 99210059; Full Spiral D2 -28W cat.№ 99210060; Full Spiral D2 -32W cat.№ 99210061; Full Spiral D2 -36W cat.№ 99210062; Half Spiral/T2 -9W cat.№ 992100144; Half Spiral/T2 -11W cat.№ 992100146; Half Spiral/T2 -15W cat.№ 992100148; Half Spiral/T3 -20W cat.№ 992100150; Half Spiral/T3 -25W cat.№ 992100151; Half Spiral/T5 -55W cat.№ 992100268

(name of object to be tested, type, model, quantity, type – portable, fixed, for walling in and other)

APPLICANT FOR TEST: "ELMARK INDUSTRIES" SC. 2 Dobrudja Blvd. Dobrich, Bulgaria,
Tel.: 058 500 055, e-mail: denkov@elmark.bg
Application № 1088 / 10.11.2014

(name of the firm – applicant, address, telephone, number and date of the test application)

METHOD OF TEST : BDS EN EN 60968:2013+A1:2014 Self-ballasted lamps for general lighting services;
Safety requirements

(number and name of the standards)

DATE OF ACCEPTANCE IN THE TEST LABORATORY: 17.11.2014

CODE OF THE OBJECT: 1 piece
(identification number, year of production)

MANUFACTURER: "ELMARK INDUSTRIES" SC. 2 Dobrudja Blvd. Dobrich, Bulgaria,
Tel.: 058 500 055, e-mail: denkov@elmark.bg
(firm, trade mark, address)

DECLARED TECHNICAL DATA: Rated voltage – 230 V
Rated frequency – 50 Hz
Rated power – 45 W
Cab - E27

DATE OF TEST PERFORMANCE : 17.11.2014 – 18.12.2014

LABORATORY CHIEF :
/ T. Hristov /



**The results showed in present certificate concern tested sample only
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laboratory**

Copy of identification table and/or photo of tested object



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**LABORATORY FOR TESTING OF MACHINERY, EQUIPMENT AND DEVICES
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RESULTS OF TESTING:

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BDS EN 60968:2013

Test report : № 2e-14-1088 / 18.12.2014

| Nº | Factor name | Units | Standard method | Nº of sample | Test results | Factor volume and tolerance | Test conditions |
|-----------|---|----------------------------------|-----------------|--|---|---|---|
| 1. | Interchangeability | - | cl. 6 | 1088 | - | cl. 6 | - |
| 1.1 | Check lamp cap dimensions | mm mm mm mm mm mm | cl. 6.1 | 1088 1088 1088 1088 1088 1088 | H = 10,3 C = 3,9 S ₁ = 7,6 T ₁ = 22,1 d = 26,2 d ₁ = 23,9 | cl. 6.1 Table 1 BDS EN 60061-1 H = 9,5 ÷ 11,5 C > 3,50 S ₁ = 7 ÷ 8,5 T ₁ > 22 d = 26,05 ÷ 26,45 d ₁ < 24,26 | - |
| 2. | Protection against electric shock | - | cl. 7 | 1088 | - | cl. 7 | - |
| 2.1 | Check with test finger | N | cl. 7 | 1088 | withstand 10 | cl. 7 10 | - |
| 3. | Insulation resistance and electric strength after humidity treatment | - | cl. 8 | 1088 | - | cl. 8 | 48 h t=25°C HR = 93% |
| 3.1 | Insulation resistance | MΩ | cl. 8.2 | 1088 | R > 999,9 | cl. 8.2 R > 4 | 1 min , 500 V |
| 3.2 | Electric strength | V | cl. 8.3 | 1088 | withstand U = 4000 | cl. 8.3 U(test) = 4000 | 1 min , 50 Hz |
| 4. | Mechanical strength | - | cl. 9 | 1088 | - | cl. 9 | - |
| 4.1 | Torsion resistance of lamps | N.m | cl. 9 | 1088 | withstand M = 3 | cl. 9 M = 3 | - |
| 4.2 | Protection against electric shock after mechanical strength test | - | cl. 7 | 1088 | - | cl. 7 | - |
| 4.2.1 | Check with test finger | N | cl. 7 | 1088 | withstand 10 | cl. 7 10 | - |
| 5. | Cap temperature rise (above ambient) | K | cl. 10 | 1088 | 24 | cl. 10 < 120 | U _{sup} = 230 V t _{amb} = 23°C |
| 6. | Resistance to heat | mm | cl. 11 | 1088 | 0,8 | cl. 11 ≤ 2 | t=125°C 60 min |
| 7. | Resistance to flame and ignition | °C | cl. 12 | 1088 | no ignition at 650°C | cl. 12 650 | - |

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Used technical equipments:

| № | Designation | Type | Manufacturer | Identification № | Date of last calibration |
|----|--------------------------------|------------|------------------------------------|------------------|--------------------------|
| 1. | Appliance multitester | CA6160 | CHAUVIN ARNOUX France | 16010173 | 21.03.2014 |
| 2. | Digital multimeter | UNIGOR 390 | LEM- Austria | PI 3288 | 19.03.2014 |
| 3. | Climatic chamber | Alpha 990H | Design Environmental England | A3793 | - |
| 4. | Multi channel thermometer | MT100TD-16 | Bulgaria | 0418/2009 | 09.06.2014 |
| 5. | Digital gauge | - | China | 090 | 18.12.2014 |
| 6. | Thermometer-hygrometer | 177-H1 | TESTO Germany | 01320300/902 | 19.04.2012 |
| 7. | Appliances, devices and gauges | - | Bulgaria | - | 21.07.2014 |

TEST PERFORMER: 1.....

/ T. Hristov /



2.....

/ D. Chavalinov /

HEAD OF LABORATORY:.....

/ T. Hristov /

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