

E-15

15 Watt Ultra Rad-Hard Emergency LED Luminaire



E-15, Wide optics

Product flyer, Version 1.0, April 2023

Nuclear grade Emergency LED Luminaire

E-15 is a member of extremely high radiation resistant series of LED Lighting products, proudly created and made by DITO Lighting, Slovenia, EU.

E-15 is small, light, extremely efficient 15 W nuclear grade LED Luminaire, designed for emergency lighting without internal battery. **E-15** should be connected to central emergency battery.

The Luminaire is based on our flagship **H** series, using the same materials, electronics, optics and technology, proven in many nuclear applications worldwide for years.

E-15 has the same properties as our **H** series, including radiation resistance, LOCA, ILRT, seismics and ingress protection.

E-15 is tested for Total Integrated Dose (TID) of **500 kGy** gamma, combined with **5×10^{14} n/cm² 1MeV (Si)** equivalent neutron fluence.

Different types of optics are available, depending on the lighting scenario.

E-15 can be used as an emergency Luminaire only, or with the emergency sign board. A variety of standard and custom emergency signs are available.



E-15 is true “all in one” product. The complete electronics is built-in inside the Luminaire. The unit is connected directly to the mains, **without any external boxes** mounted elsewhere outside radiation zone.

Internal electronics is soft mounted, protected against seismic shocks, vibrations, water, hot steam and most chemicals.

The product is fully potted, without any trapped air inside, therefore insensitive to external pressure changes - **ILRT compatible**.

For latest, up to date information please visit:

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E-15 with Asymmetric optics and emergency sign, wall mounted.

Specifications:

Rated power:	15 W
Available voltages:	100, 120, 220, 230, 277 V
Power factor:	> 0.9
Luminous flux:	> 2500 lm
CCT:	5000 K
CRI:	> 80
Luminaire efficacy:	> 160 lm/W
Electronics location:	internal
Housing material:	Stainless Steel
Optics material:	Silicone
Ingress protection:	IP 68, IP69K
Impact protection:	IK 08
Ambient temperature:	-20 °C to +60 °C
Weight:	3 kg
Dimensions:	250 × 200 × 70 mm
Warranty:	5 years

In compliance with (partial list):

MIL-STD-883, Method 1017 neutrons
MIL-STD-883, Method 1019 gamma
ESA ESCC No. 22900 gamma
IEEE 344 -2013
IEC 60980
2014/30/EU (EMC)
2014/35/EU (LVD)

Radiation tolerance:

Gamma:	5×10^5 Gy
Neutrons 1MeV (Si):	5×10^{14} n/cm ²

LOCA compatibility:

Ambient operational:	80 °C / 350 h
Ambient non operational:	140 °C / 24 h

Reliability (environment: GB @ 50 °C):

Calculation method:	MIL-217F N2
MTBF:	3.758.857 h
Predicted lifetime:	> 22 years
Confidence level:	95 %

Notes:

Irradiation tests performed inside the core of the TRIGA MkII nuclear research reactor with the representative NPP spectrum.

Different input voltages versions are available: 100, 120, 220, 230 and 277 VAC/VDC. Mains frequency can vary between 45 and 65 Hz. The Luminaire supports both AC and DC voltage, but does not support wide input voltage range.

The Luminaire is designed for professional use only.