

# H-100

## 100 Watt Ultra Rad-Hard LED Luminaire

*LOCA certified  
Seismic certified  
Radiation certified  
CB, CE, FCC certified*

Product flyer, Version 2.0, November 2021

## Nuclear grade High-Bay LED Luminaire.

**H-100** is a member of extremely high radiation, high temperature resistant series of LED Lighting products, proudly created and made by DITO Lighting, Slovenia, EU.

**H-100** is a nuclear grade High-Bay LED Luminaire, designed to be used in high radiation, high temperature areas. The housing of the Luminaire is made of stainless steel. The product is LOCA and seismic tested and certified.

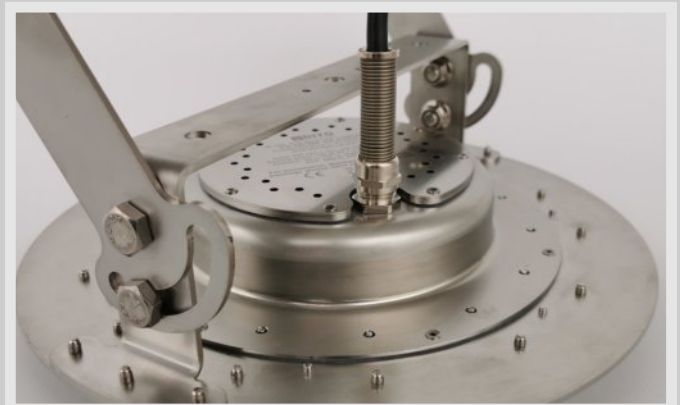
Typical application for the **H-100** is High-Bay lighting inside the RB of the NPP.

**H-100** is tested for TID of **500 kGy** gamma, combined with  **$5 \times 10^{14}$  neutron/cm<sup>2</sup> 1MeV (Si)** equivalent neutron fluence.

**H-100** is small, light, extremely efficient 100 W LED Luminaire, designed for simple one-to-one replacement of the existing mature lighting technologies.

Complete electronics (driver) is located inside the Luminaire. The unit is connected directly to the mains, without any external boxes mounted elsewhere outside radiation area. In most cases no rewiring is needed.

**H-100** uses silicone optics. Silicone optics is flexible, has operational temperature range of over 200 °C, is



100 % shatterproof, browning proof and chemically stable.

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

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

For latest, up to date information please visit:

[www.dito-lighting.com](http://www.dito-lighting.com)  
[info@dito-lighting.com](mailto:info@dito-lighting.com)



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# H-100

## 100 Watt Ultra Rad-Hard LED Luminaire



### Specifications:

Rated power:	100 W
Rated voltages:	100-277 V AC or DC
Power factor:	> 0.9
Luminous flux:	> 16.000 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 / IP 69K
Impact protection:	IK 08
Ambient temperature:	-20 °C to +60 °C
Weight:	5.8 kg
Dimensions:	dia 320 × 208 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:	$5 \times 10^5$ Gy
Neutrons 1MeV (Si):	$5 \times 10^{14}$ n/cm <sup>2</sup>

### LOCA compatibility:

Ambient operational:	80 °C/350 h
Ambient non operational:	170 °C/24 h

### Seismic capacity:

Frequency range:	1 to 35 Hz, random
Base excitation:	> 10 g @ any axis

### 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.

The product is available with different input voltages ranging from 100 to 277 VAC or VDC, 50 or 60 Hz.