

L-50 Gen IV

50 Watt Rad-Hard LED Luminaire



Product flyer, Version 1.0, March 2019

Generation IV Rad-Hard LED Luminaire.

L-50 is fourth generation of high radiation and high temperature resistant series of LED products, proudly created and made by DITO Lighting, Slovenia, EU.

L-50 is a nuclear, military, medical and space grade low-bay LED Luminaire, designed to be used in moderate to high radiation, high temperature areas. The Luminaire is simplified, yet more affordable version of his older brother, the **H-50**, sharing the same mechanical, photometric and electrical properties.

The housing is made out of aluminium. Overall weight is very low, easy to handle and is preferred choice for less demanding nuclear applications.

L-50 is tested for TID of **50 kGy** gamma, combined with **5×10^{13} n/cm² 1MeV (Si)** equivalent neutron fluence.

Overall system efficacy is more than 160 lm/W. Available with two types of silicone optics - medium and wide. Different types of optics enable simple one-to-one replacement of mature lighting technologies in almost any lighting scenario.

Silicone optics is flexible, has operational temperature range of over 200 °C, is 100 % shatter proof and chemically stable.



Generation IV is fully potted, no trapped air inside. Therefore insensitive to sudden ambient pressure changes. Soft mounting of the electronics means high seismic capacity, no sensitivity to vibrations and excellent protection against water, hot steam and other chemicals.

Proprietary electronics is based on full discrete design without integrated circuits, electrolytic capacitors and opto couplers. Predicted lifetime is more than 20 years. Mission profile 24/7 at 50 °C ambient temperature.

For latest, up to date information please visit:

www.dito-lighting.com
info@dito-lighting.com

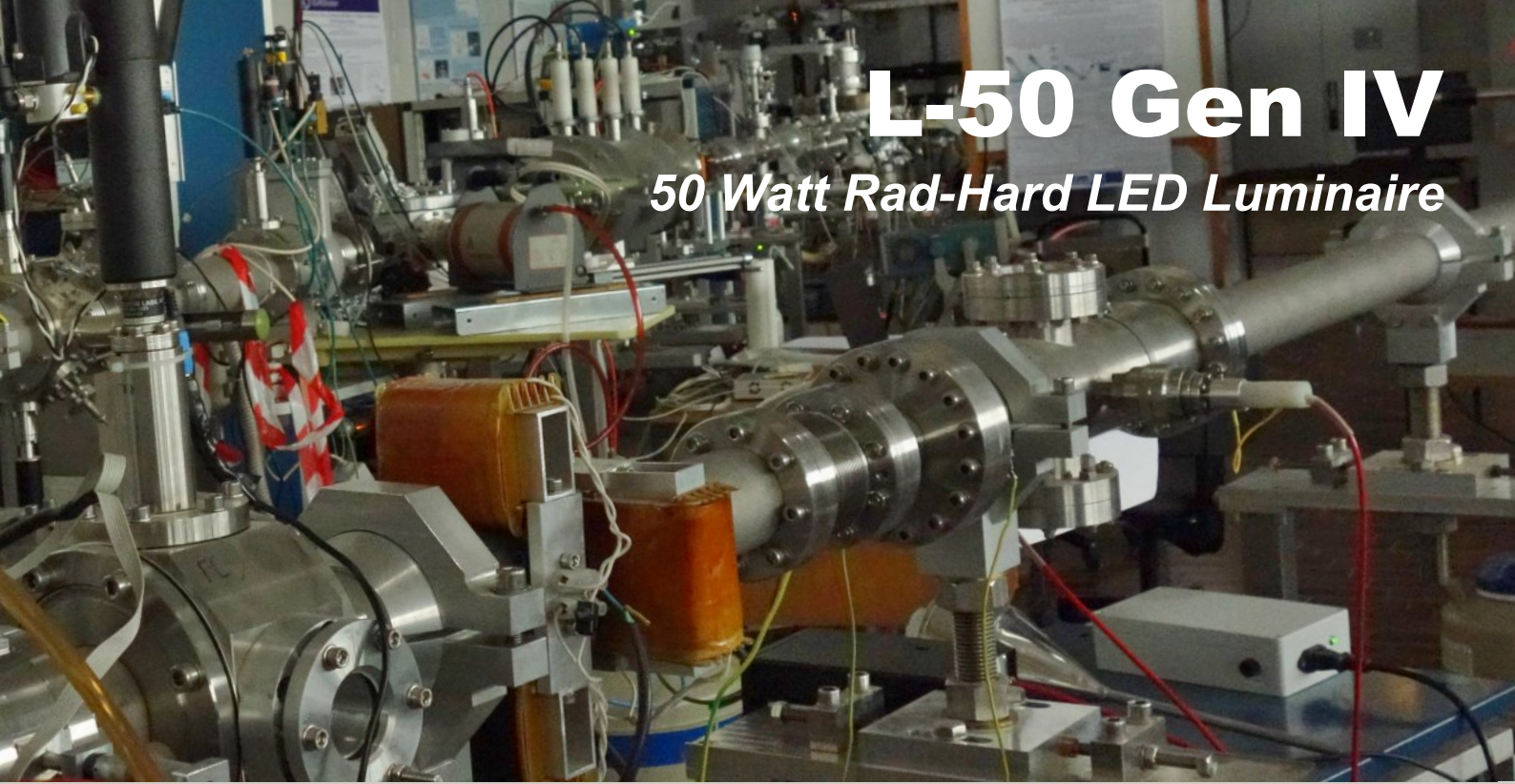


Published by DITO Lighting.
DITO reserves the right to make changes without prior notice.

DITO Lighting logo is registered trademark.
H-50 and **H-50** are registered models.
Copyright © DITO Lighting, 2019. All rights reserved.

L-50 Gen IV

50 Watt Rad-Hard LED Luminaire



Specifications:

| | |
|-----------------------------|------------------|
| Nominal power: | 50 W |
| Nominal voltage: | 230 V AC or DC |
| Power factor: | > 0.95 |
| Luminous flux: | > 8000 lm |
| CCT: | 5000 K |
| CRI: | > 80 |
| Overall Luminaire efficacy: | > 160 lm/W |
| Electronics efficiency: | > 90.0 % |
| Housing: | Aluminium |
| Optics protection: | Silicone |
| Ingress protection: | IP 65 |
| Impact protection: | IK 07 |
| Ambient temperature: | -20 °C to +80 °C |
| Weight: | 1.8 kg |
| Dimensions: | dia 240 × 124 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 (LVD)
2014/35/EU (EMC)

Radiation tolerance:

| | |
|---------------------|--------------------------------------|
| Gamma: | 5×10^4 Gy |
| Neutrons 1MeV (Si): | 5×10^{13} n/cm ² |

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 research reactor with the representative NPP spectrum.

The product is also available with other input voltages.