

# the U-Series

Nuclear Grade LED Luminaires  
Product Flyer - Preliminary



PFU-0126

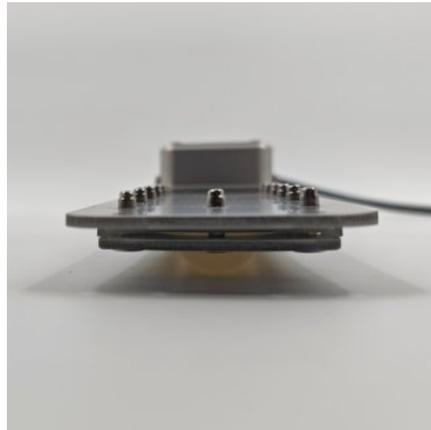


## Our technology

Our **U-50** luminaire has been comprehensively upgraded to a new standard.

It now features custom CoB LEDs and a bespoke optic, both newly engineered.

Furthermore, the housing has been completely redesigned to deliver enhanced mechanical stability, superior thermal performance, improved photometric properties, and a refined aesthetic.



## Your benefits

- **Slim Profile:** Compact and lightweight linear design.
- **Easy Installation:** Can be inserted through a 74 mm circular access port.
- **Retrofit Ready:** A direct replacement for fluorescent luminaires in most hot-cell designs.
- **Maximum Durability:** Aluminum housing ensures excellent thermal performance and long life.
- **Radiation Hardened:** Built for very high gamma and neutron resistance.



## Applications

The **U-50** is engineered for demanding nuclear environments outside the containment of the NPPs, where high levels of gamma and neutron radiation are present. Its robust design makes it ideal for:

- Scientific nuclear facilities
- Hot cells
- Accelerators
- Sterilization facilities
- Spent fuel storage & processing facilities
- Isotope production



*At its core, the **U-50** retains the same proven, tested, and certified radiation-resistant technology trusted across our entire product line.*



### True “all-in-one” solution

No external boxes are required outside the radiation zone, as the LED driver is seamlessly integrated into the luminaire itself.



### Ultra slim design

Compact and slim design enables the **U-50** to be inserted through the circular opening of 74 mm.

U-50 Properties	
Nominal Power:	50 W
Luminous flux:	> 7.500 lm
System efficacy:	> 150 lm/W
Optics type:	100 degrees FWHM
Dimensions (w/o holder):	600 x 69 x 50 mm ( 23.6 x 22.7 x 1.8 In )
Net weight (U-50 only):	1.1 kg ( 2.4 lbs )
Gross weight (packaged in the box):	2 kg ( 4.4 lbs )
Radiation tolerance TID gamma:	5 x 10 <sup>5</sup> Gy
Neutron fluence 1MeV (Si):	5 x 10 <sup>14</sup> n/cm <sup>2</sup>
Input voltage rating:	120, 230 or 277 VAC (45-65 Hz) or VDC
Power factor:	> 0.9
Appliance/protective class (IEC 61140):	Class I
Installation class (IEC 61000-1-5):	Class 3, 1 kV L-N, 2 kV LN-PE
CCT:	5000 K
CRI:	> 80
Ingress / Impact protection:	IP 54 / IK 07
MTBF, MIL-217F N2, GB @ 50 °C:	> 3 x 10 <sup>6</sup> h, Predicted lifetime > 22 years @ 95 % confidence level
Ambient temperature:	0 °C to 60 °C (32 °F to 140 °F)
Standard mains cable length:	5 m
Driver location:	Internal, direct connection to the mains, no external boxes
Housing / optics material:	Aluminum / Silicone
Warranty:	5 years
Certificates:	Radiation, CE, CB, FCC

### Notes:

- Custom holder and custom cable length are available on request.
- The Luminaires are designed for professional use only.

## get in touch with us:

**DITO Lighting d.o.o.**

Gorica pri Slivnici 144, 3263 Gorica pri Slivnici  
Slovenia

[nuclear@dito-lighting.com](mailto:nuclear@dito-lighting.com)

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

