

## 1.1.1.7.2 LED Irradiance and Dosage Sensors

### 100nW/cm<sup>2</sup> to 15W/cm<sup>2</sup>

#### Features

- Measure irradiance in W/cm<sup>2</sup> and dosage in J/cm<sup>2</sup>
- Cosine corrected
- 200nm to 850nm
- Ø2.75mm and Ø8mm aperture
- For lasers and LEDs

PD300RM-UV / PD300RM-8W



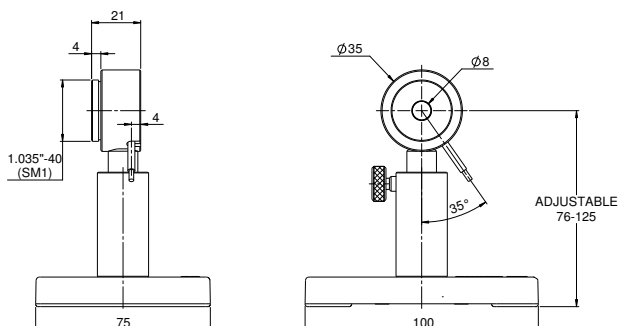
PD300RM-UVA



Model	PD300RM-UV	PD300RM-8W	PD300RM-UVA
Detector Type	Silicon	Silicon	Silicon
Input Port Aperture mm	Ø8	Ø8	Ø 2.75
Spectral Range nm	200-850	350-850	350-450
Functions	Irradiance [W/cm <sup>2</sup> ] Dosage [J/cm <sup>2</sup> ]	Irradiance [W/cm <sup>2</sup> ] Dosage [J/cm <sup>2</sup> ]	Irradiance [W/cm <sup>2</sup> ] Dosage [J/cm <sup>2</sup> ]
Irradiance Range	100nW/cm <sup>2</sup> – 250mW/cm <sup>2</sup>	1µW/cm <sup>2</sup> – 8W/cm <sup>2</sup> (d)	1.5µW/cm <sup>2</sup> – 15W/cm <sup>2</sup> (d)
Irradiance Scales	300mW/cm <sup>2</sup> to 300nW/cm <sup>2</sup> (7 scales), Auto ranging	30W/cm <sup>2</sup> to 30µW/cm <sup>2</sup> (7 scales), Auto ranging	30W/cm <sup>2</sup> to 30µW/cm <sup>2</sup> (7 scales), Auto ranging
Resolution nW/cm <sup>2</sup>	0.1	10	10
Maximum Irradiance	200nm-400nm, 250mW/cm <sup>2</sup> 400nm-550nm, 100mW/cm <sup>2</sup> 550nm-850nm, 40mW/cm <sup>2</sup>	350nm-650nm, 8W/cm <sup>2</sup> 650nm-850nm, 4W/cm <sup>2</sup>	350nm-450nm, 15W/cm <sup>2</sup>
Dosage Sample Rate	500 samples per second	500 samples per second	500 samples per second
Calibration Uncertainty ±% (e)	3.4 400-850nm	3.4 400-850nm	3.6 350-400nm 3.4 400-450nm
Deviation from Flatness Accuracy	N.A.	N.A.	±3%, 350-400nm, 400-450nm
% error vs Wavelength nm (c)	±10% 200-250nm ±7.5% 250-300nm ±5% 300-400nm ±4% 400-850nm (a)	±5% 350-400nm ±4% 400-850nm (a)	±6% 350-400nm ±5% 400-450nm (b)
Thermal Coefficient %/°C	-0.03	-0.03	-0.03
Damage Threshold W/cm <sup>2</sup>	10	50 (d)	50 (d)
Max Pulse Energy (for laser ns pulse) µJ	0.4	20	20
Noise Level nW/cm <sup>2</sup>	5	45	65
Response Time with Meter s	0.2	0.2	0.2
Linearity %	±0.5	±0.5	±0.5
f <sup>2</sup> Cosine Correction Factor Accuracy	5%	5%	6.5% (f)
Size	Ø35 x 21mm see drawing	Ø35 x 21mm see drawing	Ø35 x 21mm see drawing
Weight	110g	110g	110g
Compatible Meter (g)	Centauri, StarBright and StarLite with or without StarLab, Juno+, Juno-RS	Centauri, StarBright and StarLite with or without StarLab, Juno+, Juno-RS	Centauri, StarBright and StarLite with or without StarLab, Juno+, Juno-RS
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version			
Part number	7Z02479	7Z02480	7Z02492

Notes: (a) Accuracy given for lasers. Accuracy for LEDs depends on peak wavelength and bandwidth. Contact Ophir for more details.  
 (b) Applicable to lasers and LEDs, includes deviation from flatness.  
 (c) Accuracy includes uncertainty of NIST calibrated reference.  
 (d) Do not exceed 30 seconds of continuous exposure at > 5W/cm<sup>2</sup>.  
 (e) For calibration uncertainty of wavelengths outside of this range see table on page 24.  
 (f) Up to 70 degrees.  
 (g) Support of Centauri for irradiance sensors is from firmware version 5.02 and up.

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