

1.4.2.3 Standard Customized Solutions (OEM) Thermal and Photodiode Sensors

100pW to 3W

Features

- Conduction cooled
- Thermal sensors are spectrally flat
- Analog or RS232 output
- UAF version can give analog voltage output or digital RS232 output and can measure power or energy. Can also have multiple switchable ranges and/or multiple switchable wavelengths
- Wide dynamic range, switchable ranges
- Selectable wavelengths



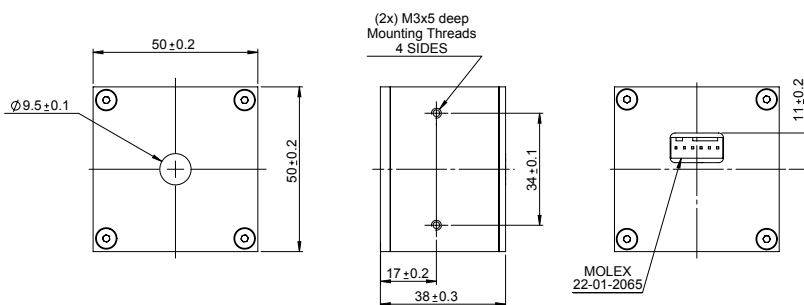
These specifications refer to standard OEM sensors, and are to be understood as generic, describing sensor families.

Ophir will be happy to help you with a specific solution for your particular application.

Model	3A-UAF	PD300-UAS
Type	RS232 or Analog output	RS232 or Analog output
Features	Measures very low power, built in amplifier	Small size, built in amplifier, wide dynamic range, detector can be flush with top
Absorber Type	Broadband	Photodiode
Spectral Range μm	0.19 – 20 ^(c)	0.2 – 1.1 ^(c)
Aperture mm	$\varnothing 9.5$	10x10
Maximum Power ^(a)	3W	Up to 50mW
Power Mode		
Minimum Power	100 μW	As low as 100pW
Power Noise Level	<8 μW RMS ^(d)	As low as 1pW
Thermal Drift (over 30 minutes)	< $\pm 10\mu\text{W}$ ^(d)	
Maximum Average Power Density W/cm ²	1000	~ 50
Response Time (0-95%), typ. (sec)	1.8	0.2
Calibration Uncertainty	$\pm 1.9\%$	$\pm 1.1\%$ 430-1000nm ^(e)
Power Accuracy $\pm\%$ at Calibrated Wavelength	3	3
Linearity with Power $\pm\%$	1.5	1
Amplifier Power Supply	+6V to +24V	+6V to +24V
Energy Mode		
Maximum Energy	2J	NA
Minimum Energy	20 μJ	NA
Energy Accuracy $\pm\%$ at calibrated wavelength	5	NA
Maximum Energy Density J/cm ²		
<100ns	0.3	NA
0.5ms	1	NA
2ms	2	NA
10ms	4	NA
Cooling	Conduction	Conduction
Connections	6 pin Molex ^(b)	6 pin Molex ^(b)
Dimensions	50x50x38mm	38x38x32mm
Compliance	RoHS, China RoHS	RoHS, China RoHS
Part number	Consult Ophir Representative	Consult Ophir Representative

Notes: (a) With analog "UAS" version, maximum power is also limited by maximum output voltage where output voltage is at most 2V less than input voltage. With analog "UAF" versions, sensor voltage output is accurate up to 2v below lowest level of supply voltage, taking into account supply voltage ripple
 (b) 6 pin Molex connections: RS232 input, Ground, +Voltage, Analog signal out, high/low voltage or switch input when used, RS232 output
 (c) Calibrated at customer selected wavelength or wavelengths
 (d) In a quiet thermal environment with FOV limiting
 (e) For calibration uncertainty of wavelengths outside of this range see table on page 24

3A-UAF



PD300-UAS

