



## 1.1.1.6 Integrating Spheres

### 1.1.1.6.1 Small Dimensions 1"-1.6"

#### 500nW to 3W

##### Features

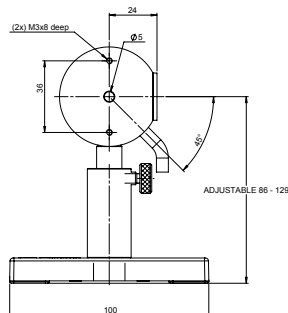
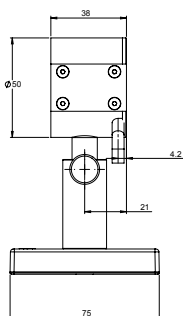
- Integrating sphere for divergent beams (LEDs, VCSELs, etc.)
- Up to Ø12mm aperture
- Fiber or free space input



Model	IS-1-2W	3A-IS	3A-IS-IRG
Use	Divergent beams to 2W for UV to NIR	Divergent beams to 3W for visible and NIR	Divergent beams to 3W for IR
Detector Type	Si	Si	InGaAs
Input Port Aperture mm	Ø5mm	Ø12mm	Ø12mm
Spectral Range $\mu\text{m}$	0.22 - 1.1	0.35 - 1.1	0.8 - 1.7
Power Range	500nW - 2W	1 $\mu\text{W}$ - 3W	1 $\mu\text{W}$ - 3W
Power Scales	2W to 20 $\mu\text{W}$ and dBm	3W to 3 $\mu\text{W}$ and dBm	3W to 3 $\mu\text{W}$ and dBm
Calibration Uncertainty nm	$\pm 1.1\%$ 430-1000 <sup>(b)</sup>	$\pm 1.1\%$ 430-1000 <sup>(b)</sup>	$\pm 2.4\%$ 800-1430 <sup>(b)</sup>
% Error vs Wavelength nm	$\pm 7$ 220-250 $\pm 5$ 250-420 $\pm 4$ 420-950 $\pm 7$ 950-1100	$\pm 5$ 350 -1000 $\pm 10$ 1000-1100	$\pm 5$
Linearity with Power $\pm\%$	1	1	1
Damage Threshold kW/cm <sup>2</sup>	1 on integrating sphere surface	0.2 on integrating sphere surface	0.2 on integrating sphere surface
Maximum Pulse Energy $\mu\text{J}$	600	100	500
Power Noise Level nW	20	20	20
Response Time with Meter s	0.2	0.2	0.2
Maximum Beam Divergence	$\pm 40$ degrees for fan shaped beam, $\pm 50$ degrees for circular beam	$\pm 40$ degrees	$\pm 40$ degrees
Sensitivity to Beam Size and Angle	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
Cooling	convection	convection	convection
Fiber Adapters Available (see page 32)	ST, FC, SMA, SC	ST, FC, SMA <sup>(a)</sup> , SC	ST, FC, SMA <sup>(a)</sup> , SC
Weight kg	0.25	0.6	0.6
Compliance	CE, UKCA, China RoHS	CE, UKCA, China RoHS	CE, UKCA, China RoHS
Version		V1	
Part Number	<b>7Z02484</b>	<b>7Z02404</b>	<b>7Z02403</b>

Notes: (a) One fiber output port available with output = 2E-4 of input power/mm<sup>2</sup> of fiber area  
 (b) For calibration uncertainty of wavelengths outside of this range see table on page 24

IS-1-2W



3A-IS / 3A-IS-IRG

