

## 1.1.4.3 High Power Water Cooled and Fan Cooled Laser Beam Dumps

### Up to 10kW

#### Features

- Up to 10kW CW
- Water or Fan cooled
- High Power Density
- $\phi 45$ -50mm aperture

BDFL500A-BB-50



BD5000W-BB-50

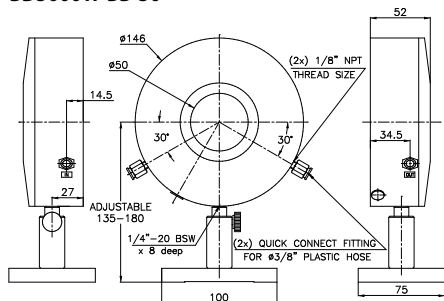


BD10K-W

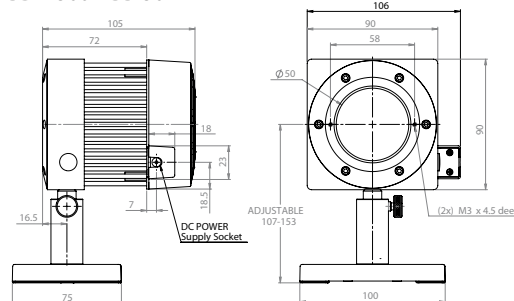


Model	BDFL500A-BB-50	BD5000W-BB-50	BD10K-W
Use	General purpose High power beam dump		
Absorber Type	Broadband	Broadband	Beam Deflector + Broadband
Spectral Range $\mu\text{m}$	0.19 - 20	0.19 - 20	0.19 - 20
Typical Absorption	86% for 600 to 2500nm, 82% for 10.6 $\mu\text{m}$		
Aperture mm	$\phi$ 50mm	$\phi$ 50mm	$\phi$ 45mm
Maximum Incident Power	500W	5000W	10,000W
Maximum Average Power Density	7kW/cm <sup>2</sup>	6kW/cm <sup>2</sup> at 1000W 3kW/cm <sup>2</sup> at 5000W	See note (b) below
Maximum Energy Density J/cm <sup>2</sup>			See note (b) below
<100ns	0.3		
1 $\mu\text{s}$	0.4		
0.5ms	5		
2ms	10		
10ms	30		
Cooling	Fan	water	water
Minimum Water Flow Rate at Full Power	N/A	4.5 liter/min <sup>(a)</sup>	9 liter/min <sup>(a)</sup>
Weight kg	0.9	2.8	4.5
Version			
Part number	7Z17200	7Z17201	7Z17202
Notes: (a)	Water temperature range 18-30°C. Water temperature rate of change <1°C/min		
Notes: (b) Max power and energy density	Beam diameter	Max power density	Max energy density
	<15mm	10kW/cm <sup>2</sup>	1ms pulse width 30J/cm <sup>2</sup> 3ms pulse width 60J/cm <sup>2</sup> 10ms pulse width 150J/cm <sup>2</sup>
	15 - 20mm	7kW/cm <sup>2</sup>	20J/cm <sup>2</sup> 40J/cm <sup>2</sup> 100J/cm <sup>2</sup>
	20 - 40mm	5kW/cm <sup>2</sup>	15J/cm <sup>2</sup> 30J/cm <sup>2</sup> 70J/cm <sup>2</sup>
	40 - 45mm	4kW/cm <sup>2</sup>	12J/cm <sup>2</sup> 25J/cm <sup>2</sup> 60J/cm <sup>2</sup>

BD5000W-BB-50



BDFL500A-BB-50



BD10K-W

