1.1.2.12 Accessories for High Power Water Cooled Sensors

1.1.2.12.1 Fiber Adapter for Ophir High Power Sensors

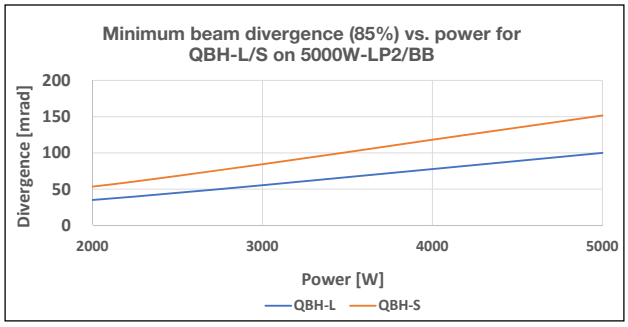
Adapters for high power fiber connectors are available for Ophir sensors L1500W and 5000W for use in industrial environments.
The fiber adapters allow mounting of QBH fiber terminators to Ophir sensors. When using an adapter, the fiber output is centered on the sensor surface and is isolated from surrounding dust and contaminants.
Choice of the correct adapter model depends on the power and divergence angle of the laser being measured, see specs below.
Note: Ophir does not supply the QB bayonet, more details can be found in the User Notes.

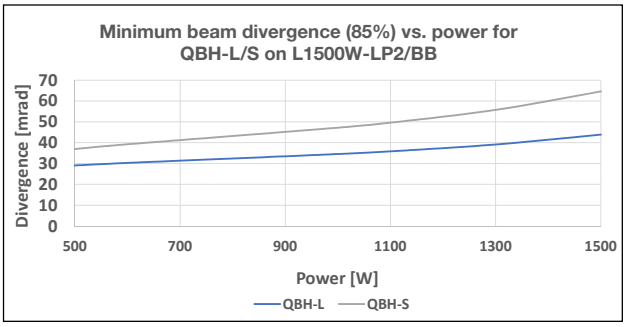
Fiber adapter QBH mount L compatible, Mounted on 5000W sensor

Description	QBH fiber adapter for high power sensors models	
Use	**Adapter for direct measurement of QBH fiber output**	
Sensors Supported	L1500W-LP2-50, L1500W-BB-50, 5000W-LP2-50 and 5000W-BB-50 [a]	
Added Error	1% for BB type coatings	
Housing Temperature at Max Power	55°C [b]	
Cooling	Water, maximum temperature 30°C	
Fiber Adapter Water Flow Requirements	2 liter/min, minimum [c]	
Water Connectors	(2x) Quick Connect Fitting For Ø3/8 Plastic Hose [d]	
Model	Fiber adapter QBH mount L compatible	Fiber adapter QBH mount S compatible
Maximum Beam Divergence Half Angle [e] Minimum Beam Divergence Half Angle	120 mrad (180 mrad) See note [f]	180 mrad (270 mrad) See note [f]
Dimensions	See drawing below	See drawing below
Part number	**7Z08456**	**7Z08457**

Note: (a) Please note that older versions of the above sensors do not have the requisite 4 threads on Ø70mm circle on their front flange and cannot be used with the QBH adapter.
Note: (b) When using BB type coatings temperature may reach 80°C at midpoint of adapter.
Note: (c) The water flow requirements of the fiber adapter are much lower than that of the water-cooled sensor (see the sensor data sheet for details). Therefore, the fiber adapter can be connected in series with the sensor water supply but then the water flow rate of both will have to meet the sensor minimum water flow rates.
Note: (d) For Metric water connectors see page 116.
Note: (e) Divergence angle given defines radius of beam containing 86% of power, the divergence of 98% of the power is given in brackets.

Note: (f) Graphs of beam divergence:



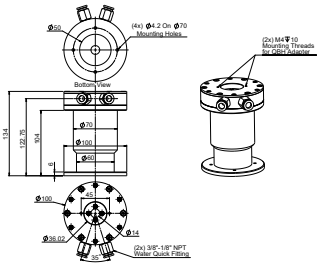


The parameters in the graphs above assume that the fiber adapter used is a generic QB bayonet. For specific models the maximum and/or minimum N.A values for the fibers may differ – please consult User Notes for more details.

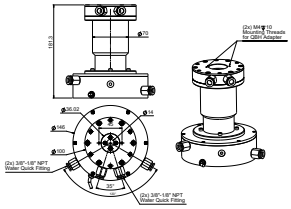
High Power QBH-Fiber Adapter

Fiber adapter QBH mount L compatible

Standalone

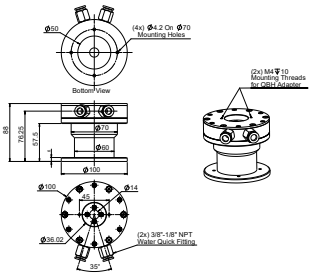


Mounted on a 5000W sensor



Fiber adapter QBH mount S compatible

Standalone



Mounted on a 5000W sensor