

**OPEN PATH (OPX) HEAD ASSEMBLY  
ISA DATA SHEET**



<b>General</b>	1	Manufacturer	Boreal Laser Inc.
	2	Analyzer Model No.	Not Selected - Open Path (OPX) Head Requires a GasFinder3 based Analyzer to Operate
	3	Measurement Head Model No.	Open Path (OPX) Head Assembly (e.g. BL-__-OPX-__-__)
	4	Warranty Period	3 years Full Warranty
<b>Cabling Options</b>	5	Cabling Type	Single Mode Fibre Optic (FC/APC) and Shielded CAT6/5e Cabling (RJ45)
	6	Allowable Cable Lengths	5 - 300 m (15 - 1,000 ft) available in 10m (30 ft) Increments (See Target Gas Requirements)
	7	Fiber Optic Cabling Specification	SMF-28 Family of Fibres (SFM-28e, SFM-28e+, SFM-28 Ultra)
	8	Fiber Optic Connector Specification	Threaded Fiber Connector / Angled Polished Connector (FC/APC) - Green Boot
	9	CAT6/5e Cabling Specification	CAT6 (625MHz), 4-Bonded Pair, F/UTP-Foil Shield, 23 AWG Solid Bare Conductors
	10	CAT6/5e Connector Specification	RJ45 (T-568A) Shielded Connector
	11	5-20 m (15-60 ft) Cable Lengths	3/4" Flexible Conduit with 3/4" Connectors
	12	30-300m (90-1,000ft) of Cable - Option #1	Standard PVC Jacketing to be ran in User supplied Conduit or Cable Tray
	13	30-300m (90-,1000ft) of Cable - Option #2	Armoured (Aluminium) and PVC Jacketed - 17.3mm (0.680") Fiber & 13mm (0.511") CAT6
	15	Measurement Head Junction Box Material	Poly Vinyl Chloride (PVC) with Removeable Front Cover
	16	Measurement Head Junction Box Size	175 x 175 mm (6.9 x 6.9 inches) with four (4) 7.11 (0.280") Thru Holes for Mounting
	17	Measurement Head Junction Box Fittings	Free Floating Bulkhead Connectors for Fiber Optic (FC/APC) and CAT6/5e (RJ45)
	<b>Open Path (OPX) Measurement Head</b>	18	Optical Configuration
19		Assembly Composition	OPX Head, Alignment Scope, Rain/Dust Hood, and X-Y Alignment Mount
20		Assembly Weight	5.2 kg (11.5 lbs)
21		Assembly Dimension (LxWxH)	457 x 229 x 140 mm (18 x 9 x 5.5 inches)
22		Physical Configuration	Remote from Analyzer (GasFinder3-MC) via Fibre Optic and CAT6/5e Cabling
23		Mounting Hardware Configuration	Bottom mount with one (1) 3/8" - 16 and four (4) 0.281" - thru holes
24		Maximum Distance to Analyzer	Up to 300m of Single Mode Fibre and Shielded CAT6/5e Cabling (10m Increments)
25		Enclosure Material	6061 Anodized Aluminium
26		Area Classification	(A)Ex ib IIC T5 Tamb <70°C Gb (Equivalent to Class 1 Div/Zone 1 and Groups A,B,C,D)
27		Method of Protection	Intrinsic Safety "ib" & "Gb" as per IEC 60079-11
28		Temperature (OPX Head Enclosure)	-45 to 70°C (-49 to 158°F)
29		Temperature (Laser Beam)	-45°C to +150°C (-49 to +300°F) Active Measurement Path / Process
30		Beam Divergence	0.05° / 0.9 milliradian (milliradian x path length (m) = laser dot size (mm))
31		Window Material	Lexan, Mylar, or Teflon
32		Power	Non-powered (Passive)
33		Cable Entry Size	3/4" (M20) for Fibre and CAT6/5e Cabling
34		Cable Gland	Included as part of Measurement Head Assembly
35		Cable Connections	Single Mode Fibre (FC/APC) and CAT6/5e (RJ-45) - Included in Assembly
36		Dual Gas Configuration #1	All gases except O2, CO2L, COL, CO2UL can share an OPX Head with a Second Gas
37		Dual Gas Configuration #2	CO2L, COL, CO2UL can share Open Path (OPX) Head
38	Dual Gas Configuration #3	O2 always requires a dedicated Open Path (OPX) Head	
<b>Retro-Reflector</b>	39	Retro-Enclosure - Material	304 Stainless Steel (SST) or Fiberglass Reinforced Plastic (FRP)
	40	Retro-Enclosure - Rain/Dust Hood	Included with Retro-Enclosure
	41	Retro-Enclosure - Temperature Range	-45°C to +120°C (-49°F to 248°F)
	42	Retro Enclosure - Cable Entry	None
	43	Retro Enclosure - Cable Glands	None
	44	Retro-Enclosure - Window Material	Lexan, Mylar, or Teflon (Gas/Application Dependent)
	45	Retro-Array - Short Path Lengths	Grey Tape (G) Retro-Array (0.5-5 m) or IMOS (M) Retro-Array (5-50 m)
	46	Retro-Array - Medium Path Lengths	Five (5) Cornercube Retro-Array (20-125 m) or Seven (7) Cornercube Retro-Array (20-200 m)
	47	Retro-Array - Long Path Lengths	Fourteen (14) Cornercube Retro-Array (20-350 m) or Twenty-One (21) Retro-Array (20-350 m)
	48	Retro-Array - Cornercube Specification	63.5 mm (2.5") Cornercube at 30 arc-seconds
	49	Retro-Heater - Power Options	24 VDC @ 25W or 110-240 VAC @ 50W
	50	Retro-Heater - Thermostat	40°C Thermostat
	51	Retro-Heater - Area Classification	Class 1 Div 2 (Required to be installed as per local electrical code)
	52	Retro Heater - Termination	Heater and Thermostat are Mounted with flying leads (to be installed as per local electrical standards)
<b>Recommended Accessories</b>	53	Alignment Kit	BL-OAK-MC
	54	I-Beam Mounting Structure	BL-IMS
	55	Response Cell	BL-RC3-__-__ (Any two gases except HF)
	56	In-Line Response Cell	BL-ILRC-__ (HF, HCN, NH3, or CH4)
<b>Commissioning and Spares Assembly</b>	57	Commissioning and Spares Assembly	BL-CSK
<b>Latest Revision</b>	58	2/03/21	