

**STACK/DUCT (SDX) PROBE ASSEMBLY
ISA DATA SHEET**



General	1	Manufacturer	Boreal Laser Inc.	
	2	Analyzer Model No.	Not Specified	
	3	Measurement Head Model No.	Stack/Duct (SDX) Probe Assembly (e.g. BL-__-SDX-__)	
	4	Warranty Period	3 years Full Warranty	
Cabling Options	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 (90-1,000ft) 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)	
	Stack/Duct (SDX) Probe Assembly	18	Optical Configuration	Transceiver and Retro-Reflector (Mono-Static) or Transmit/Receive (Bi-Static) Available
19		Assembly Composition	Stack/Duct (SDX) Probe and Retro-Flange	
20		Assembly Weight	6.2 kg (14 lbs) + Retro Flange Option	
21		Assembly Dimension (LxWxH)	270.5 x 190 x 190 mm (10.71 x 7.5 x 7.5 inches)	
22		Physical Configuration	Remote from Analyzer (GasFinder3-MC) via Fibre Optic and CAT6/5e Cabling	
23		Mounting Hardware Configuration	ANSI 3" 150# Flange	
24		Maximum Distance to Analyzer	Up to 300m of Single Mode Fibre and Shielded CAT6/5e Cabling (10m Increments)	
25		Enclosure Material	316 Stainless Steel, 6061 Anodized Aluminium Junction Box	
26		Area Classification	(A)Ex ib IIC T5 Gb environments (Equivalent to: Class 1 Div/Zone 2 and Groups A,B,C,D)	
27		Method of Protection	Intrinsic Safety "ib" & "Gb" as per IEC 60079-11	
28		Temperature (SDX Probe Enclosure)	-45 to 70°C (-49 to 158°F)	
29		Temperature (Laser Beam) - Opt. #1	-55°C to 150°C (-49 to 300°F) with Accuracy of ±2 of Reading	
30		Temperature (Laser Beam) - Opt. #2	>150°C (>300°F) with Reduced Accuracy (Application Dependent)	
31		Pressure - Stack/Duct (SDX) Probe	50 to 200 kPa Absolute (7.25 to 29 psia)	
32		Process Pressure (Laser Beam)	50 to 200 kPa Absolute (7.25 to 29 psia)	
33		Beam Divergence	32mm (1 1/4") @ 1m (3.3ft) = (32 milliradian x path length (m) = laser dot size (mm))	
34		Window Material	Sapphire	
35		Power	Non-powered (Passive)	
36		Cable Entry Size	3/4" (M20) for Fibre and CAT6/5e Cabling	
37		Cable Gland	Included as part of Measurement Probe Assembly	
38		Cable Connections	Single Mode Fibre (FC/APC) and CAT6/5e (RJ-45) - Included in Assembly	
39		Dual Gas Configuration #1	Any two gases except O2, CO2L, COL, CO2UL can share a Stack/Duct (SDX) Probe	
40		Dual Gas Configuration #2	CO2L, COL, CO2UL can share a Stack/Duct (SDX) Probe	
41		Dual Gas Configuration #3	O2 always requires a dedicated Stack/Duct (SDX) Probe	
Retro-Flange Option #1: Standard		42	Retro Enclosure Material	316 Stainless Steel
		43	Assembly Weight	2.0 kg (4.5 lbs)
		44	Assembly Dimension (LxWxH)	9.53 x 190 x 190 mm (0.375 x 7.5 x 7.5 inches)
	45	Retro Enclosure Window Material	None	
	46	Retro-Reflector Temperature	-55°C to 85°C (-67°F to 185°F)	
	47	Retro Enclosure Cable Entry	None (Passive)	
	48	Retro Array (IMOS)	50.8 mm (2") IMOS Reflector	
49	Path Length Ranges (Retro-Arrays)	0.5-20m Diameter Stack/Duct		
Retro-Flange Option #2: High Temperature	50	Retro Enclosure Material	316 Stainless Steel	
	51	Retro Enclosure Window Material	Sapphire	
	52	Assembly Weight	4.8 kg (10.5 lbs)	
	53	Assembly Dimension (LxWxH)	200 x 190 x 190 mm (7.87 x 7.5 x 7.5 inches)	
	54	Retro-Reflector Temperature	-55°C to +120°C (-67°F to 248°F)	
	55	Retro Enclosure Cable Entry	None (Passive)	
	56	Retro Array (Cornercube)	50.8 mm (2") IMOS Reflector	
57	Path Length Ranges (Retro-Arrays)	0.5-20m Diameter Stack/Duct		
Receiver Probe (Transmit/Receive Configuration)	58	Receiver Enclosure Material	316 Stainless Steel, 6061 Anodized Aluminium Junction Box	
	59	Receiver Enclosure Window Material	Sapphire	
	60	Assembly Weight	6.2 kg (14 lbs)	
	61	Assembly Dimension (LxWxH)	270.5 x 190 x 190 mm (10.71 x 7.5 x 7.5 inches)	
	62	Receiver Temperature	-55°C to +120°C (-67°F to 248°F)	
	63	Receiver Enclosure Cable Entry	3/4" (M20) for CAT6/5e Cabling	
	64	Receiver Enclosure Cable Glands	Supplied by others (as per local electrical standards)	
65	Receiver Array (Gold Mirror)	25.4 mm (1") Gold Mirror		
66	Path Length Ranges (Retro-Arrays)	0.5-20m Diameter Stack/Duct		
Purge Insert for SDX Assembly	67	Purge Insert Material	316 Stainless Steel	
	68	Assembly Weight	7.0 kg (15.5 lbs)	
	69	Assembly Dimension (LxWxH)	200 x 190 x 190 mm (7.87 x 7.5 x 7.5 inches)	
	70	Mounting Hardware Configuration	ANSI 3" 150# Flange	
Recommended Accessories	71	Purge Connections	1/4" NPT	
	72	Alignment Kit	BL-OAK-MC	
	73	In-Line Response Cell	BL-ILRC-___ (HF, HCN, NH3, or CH4)	
	74	Commissioning and Spares Assembly	BL-CSK	
	75	Calibration Certificate Extension	BL-QDRP	
76	120-220 VAC Power Supply	BL-HAPS or BL-HAPS-S		
Latest Revision	77	2/03/21		