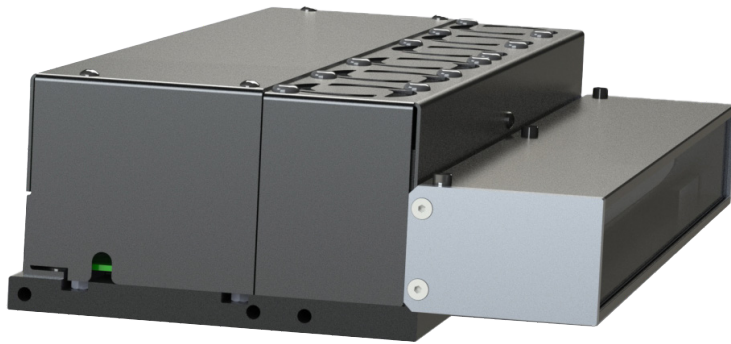


COBRA™ NX MultiSpec

Multispectral LED Line Light



Cost-Effective, High-Performance Multispectral Line Light

The new COBRA NX MultiSpec is a pioneering multispectral line light offering all of the benefits of a tunable multispectral light for cost-sensitive applications. Available in four standard configurations: RGB, RGB-NIR (855nm), RGB-White(3500K) and RGB-SWIR (1150nm, 1450nm), this modular line light offers discrete control of individual wavelengths allowing the user to select the optimum spectral profile and boost intensity at that ratio, maximizing contrast for their application.

Building on the success of the award-winning COBRA MultiSpec platform, the innovative COBRA NX MultiSpec has a market-leading compact, modular form factor. Available from 300mm and with unmatched optical options, it is configurable for a wide range of applications. Chip-on-board LED technology coupled with superior optical design delivers intense and uniform multispectral illumination at the optimal price-performance ratio. Packed with functionality, COBRA NX MultiSpec also offers on-board Ethernet control.

COBRA NX MultiSpec reduces the cost of entry for multispectral imaging applications. When paired with multispectral cameras from leading manufacturers the cost of a multispectral system can be dramatically reduced enabling new applications to benefit from the many advantages of multispectral imaging. This innovative multispectral solution will deliver an exceptional performance-to-cost ratio in applications including web inspection and food sorting.

Key Features

- RGB, RGB-NIR, RGB-White and RGB-SWIR as well as custom options available
- High Performance-to-Cost Ratio
- Compact Form Factor
- Modular: Available from 300mm up to 3m in Length
- Integrated Ethernet Control

Key Applications

- Multispectral Imaging
- Food Sorting
- Web Inspection

Typical Spectral Characteristics

Color		Blue	Green	Red	IR	SWIR	SWIR
Peak Wavelength	nm	460 ± 2.5	532.5 ± 2.5	630 ± 10	855 ± 15	1150 ± 50	1450 ± 50
Spectral Width FWHM	nm	21	35	20	25	53	75

Typical Maximum Irradiance & Illuminance⁽¹⁾

Typical Maximum Irradiance (Wm ⁻²)							
Colour	Blue	Green	Red	White	855nm	1150nm	1450nm
RGB	1960	1960	1512	-	-	-	-
RGB - W	1470	1470	1134	1410	-	-	-
RGB - NIR	470	470	357	-	470	-	-
RGB - SWIR	490	490	580	-	-	39	99

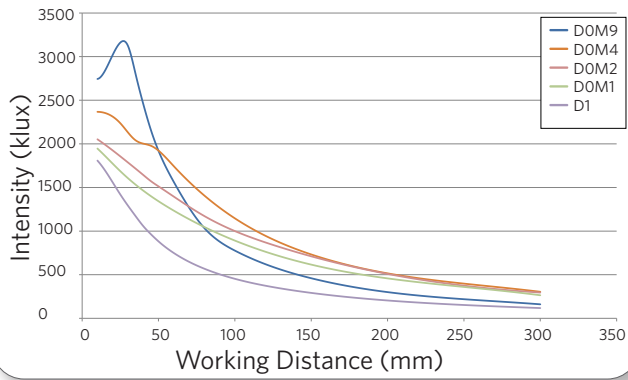
(1) *Values presented correlate to the integrals of the graphs shown on page 3

Focus & Illumination Field⁽²⁾

Lens Position	Working Distance Range (mm)	Working Distance at Peak Intensity (mm)		Line Width (FWHM) at WD (mm)		Focal Distance (mm)	Line Width at Focal Distance (mm)
Unit Length	300mm	100mm	300mm	100mm	300mm	All Lengths	All Lengths
S1	10-105	divergent	divergent	14.0-15.6	14.0-19.4	divergent	divergent
S2	10-112	divergent	divergent	12.8-13.8	12.8-16.5	divergent	divergent
S4	10-150	10	10	8.7-11.5	8.7-11.5	88	8.7
S9	10-52	41	42	3.4-7.5	3.4-7.5	50	3.4

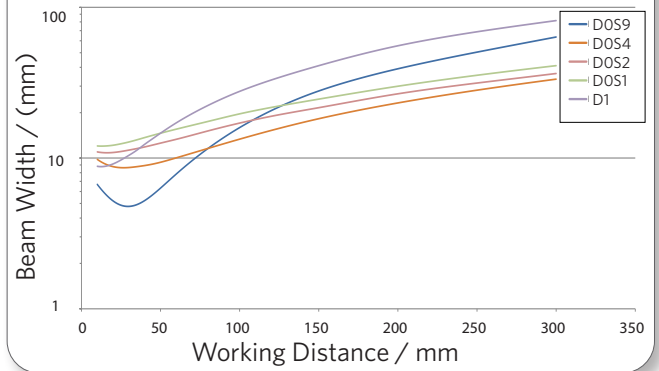
(2) Values presented are for a White COBRA and intended to provide representative information. Actual values will vary depending on wavelength and/or configuration.

Intensity Versus Working Distance - White



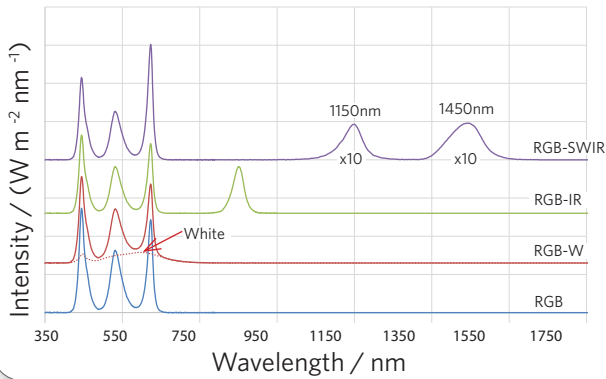
Note: Values presented are for a White COBRA and intended to provide representative information. Actual values will vary depending on wavelength and/or configuration.

Beam Width Versus Working Distance - White



Note: Values presented are for a White COBRA and intended to provide representative information. Actual values will vary depending on wavelength and/or configuration.

Wavelength Selection



Note: The integrals for the spectra presented here are used to generate the maximum irradiance data.

Note: Values shown represent wavelength groups individually pulsed (1ms pulse width, duty cycle 25%) at maximum drive current.

Part Numbers

Cooling & Type		Configuration		Standard Wavelengths (mm)		Length (mm)	Lens Type ⁽³⁾		Lens Position		Diffuser	
M	MultiSpectral (fan only)	EN	Analog Options + Ethernet Connector	0015	Red, Green, Blue	0300	S	Slim (No microlens)	0	No Lens	D0	No Diffuser
		AN	EN Options + Strobe Capability	0023	Red, Green, Blue, Infrared	0500	M	Max (with additional microlens)	1	Closest to LEDs	D1	60:10 (Backlight)
				0024	Red, Green, Blue, White	0600			2	Max collimated	D2	30:1
				0039	Red, Green, Blue, SWIR	0800			4	Slim collimated		
						0900			9	Furthest from LEDs		
						↓						
						3000						

Extrusion Type		Extrusion Length ⁽⁴⁾ (mm)		Connector Type ^{(5)&(6)}		Cable Length (m)		Cable type	
X	Extrusion body	0308	308mm total length	SC	Straight	01	1 meter	B	Braid
		0508	508mm total length	R4	Right-angled (fixed orientation)	02	2 meter	C	Cleanroom (Solid sheath)
		0608	608mm total length	A0	Right-angled, adjustable (upright position)	05	5 meter		
		0808	↓	A1	45° clockwise	15	15 meter		
		0908	↓	A2	90° clockwise	↓	↓		
		↓	↓	↓	↓	↓	↓		
		3008	3008mm total length	A6	270° clockwise	↓	↓		
		XXXX	Custom Length	A7	315° clockwise	XX	Custom Length		

(3) Non-standard lenses are also available on request

(4) Extrusion lengths are typically 8mm longer than the optical length to accommodate end caps

(5) The right angled connector is orientated 180° from vertical by default (pointing downward)

(6) The adjustable connector is a right-angled connector with position A0 denoted as in an upright position, A1 denoted as 45° clockwise orientation, etc; until A7 which denotes 315° clockwise from vertical

To order your COBRA NX MultiSpec - Select Cooling & Type (X) - Select configuration (XX) - Select wavelength code (XXXX) - Select optical length (XXXX) - Select lens type & position (XXX) - Select diffuser (XX) - Select extrusion type (X) - Select extrusion length (XXXX) - Select connector type (XX) - Select cable length (XX) - Select Cable type (X)

X	-	XX	-	XXXX	-	XXXX	-	X	-	X	-	XX	-	X	-	XXXX	-	XX	-	XXX
↑		↑		↑		↑		↑		↑		↑		↑		↑		↑		↑
Cooling		Configuration		Wavelength		Length (mm)		Lens Type		Lens Position		Diffuser Option		Extrusion Type		Extrusion Length		Connector Type		Cable Length & Type
↓		↓		↓		↓		↓		↓		↓		↓		↓		↓		↓
M	-	AN	-	0023	-	1200	-	S	-	9	-	D2	-	X	-	1208	-	A2	-	05 C

Resulting Part Number: MAN00231200S9D2-X1208-A205C

Product Description: Fan-cooled, strobe-enabled, RGB-NIR Cobra NX MultiSpec with optical length 1200mm, with lens in position 9 and D2 diffuser. Mounted on extrusion body with length 1208mm, and 5m, clean-room compatible cables with adjustable connector in position 2

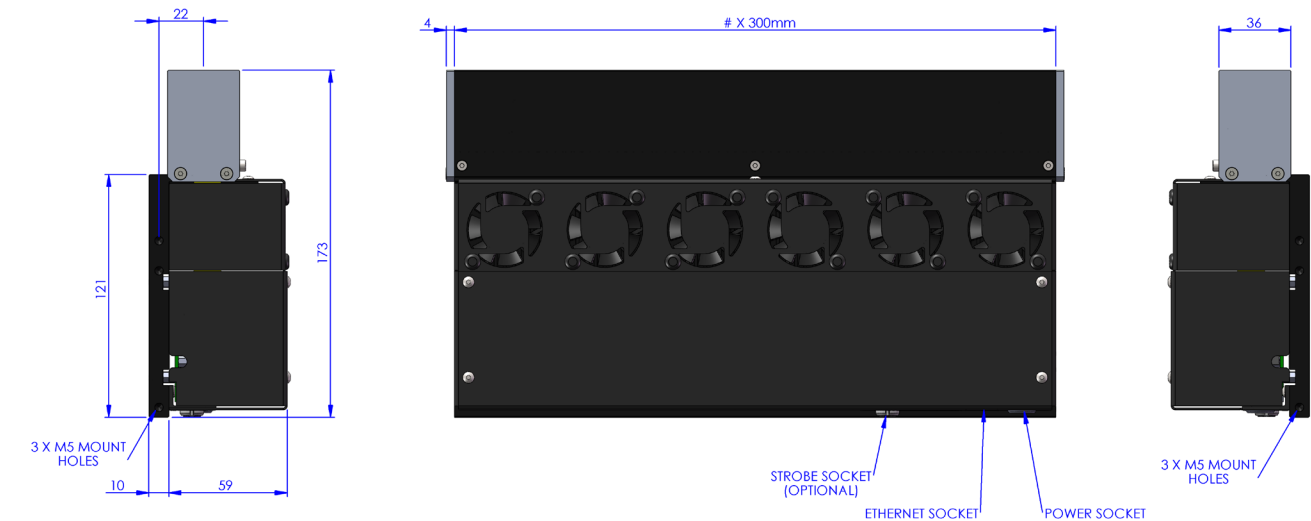
Power Requirements

Cobra Type	Power Rating per 100mm Optical Length	COBRA NX Optical Length per Power Supply ⁽⁷⁾
MXN	24 VDC ± 40W	600mm

(7) PSU-24V-240W-XX.or comparable 24 V ± 10% standard power supply

COBRA MultiSpec NX comes with a 2 meter power cable as standard. This cable can be tailored to the specific application requirements. To order the power cable use the following part number C2-CAB-P-S-XXXX where XXXX is the length of the cable in cm.

Dimensional Diagram



COBRA NX MultiSpec comes with a user-friendly GUI for intuitive control.

Document Revision: 2
(240425)

US Sales

Tel: +1 603-893-8778
sales@prophotonix.com

EMEA & ROW Sales

Tel: +44-1279-717170
sales@prophotonix.com

ProPhotonix and the ProPhotonix logo are trademarks of ProPhotonix, Inc. All other brand and product names are trademarks or registered trademarks of their respective holders. Copyright © 2025 ProPhotonix, Inc. All rights reserved.



Visit us on the Web: www.prophotonix.com