

# COBRA™ Max

## LED Line Light



### Extreme brightness illumination for linescan and web inspection

COBRA™ Max has been designed to deliver extreme brightness for your linescan application, delivering up to twice the intensity of our COBRA Slim product. Integrated optics have been optimized to deliver almost 16 million Lux whilst retaining the slim and compact design of our COBRA Slim product. The enhanced LED technology in COBRA Max delivers up to 3120 kLux without strobing.

COBRA Max utilizes the latest LED technology to ensure extreme brightness and excellent uniformity. A wide range of wavelengths are available from UV to Visible and IR. COBRA Max also offers field adjustable optics allowing you to select the optimum lens position for your application. COBRA Max is modular and is available in any length up to 6 metres.

COBRA Max is also available in the COBRA Flex configuration for applications where space is restricted.

### Key Features

- Intensities up to 3120kLux
- Extreme Brightness: Up to x2 Intensity of COBRA Slim
- Slim & Compact Design
- Field Adjustable Focusing Distance & Diffusers
- Available on all Standard Configurations of COBRA Slim and COBRA Flex
- Wavelengths from UV to Visible & IR

### Options Available

- Strobing Function for Even Higher Intensities
- Onboard Ethernet Control

### Key Applications

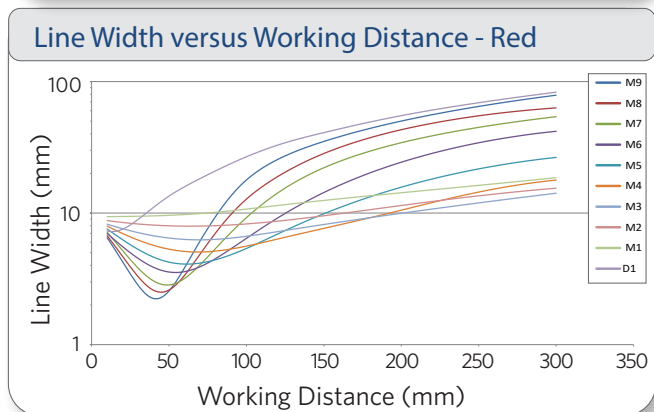
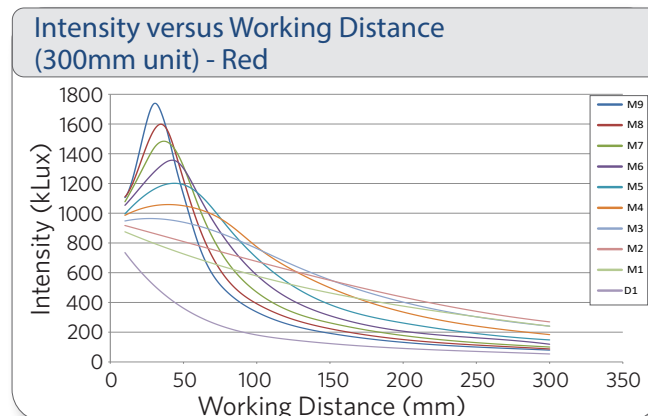
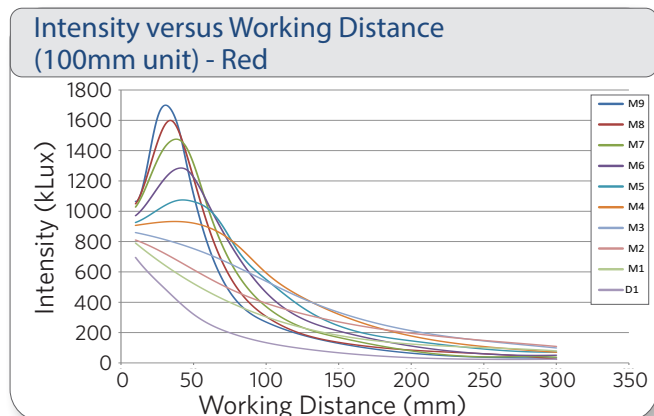
- Solar Cell Inspection
- Foil, Paper and Plastic Film Inspection
- PCB Inspection
- Glass Inspection
- Semiconductor Inspection
- Flat Panel Display Inspection

## Maximum Intensity (kLux)<sup>(1)</sup>

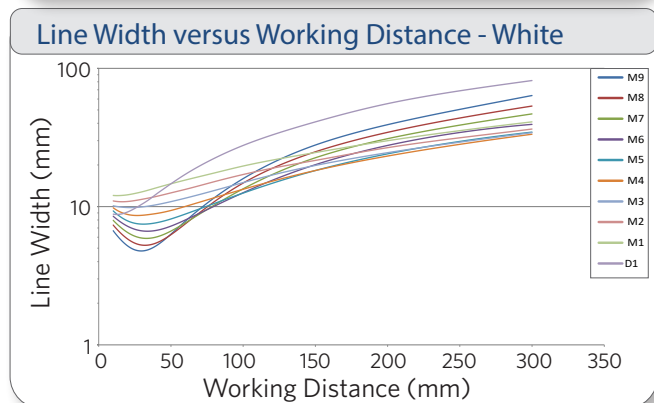
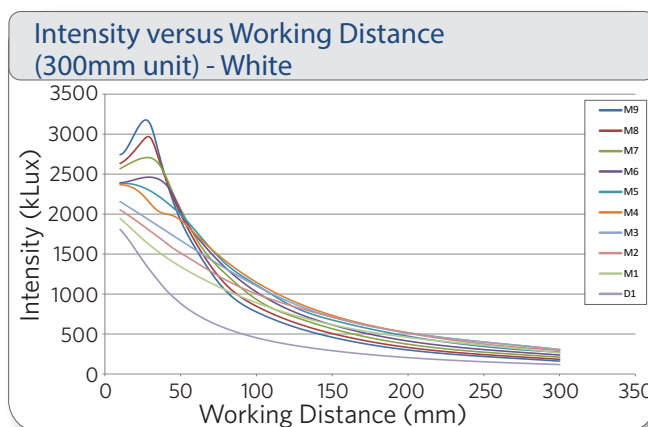
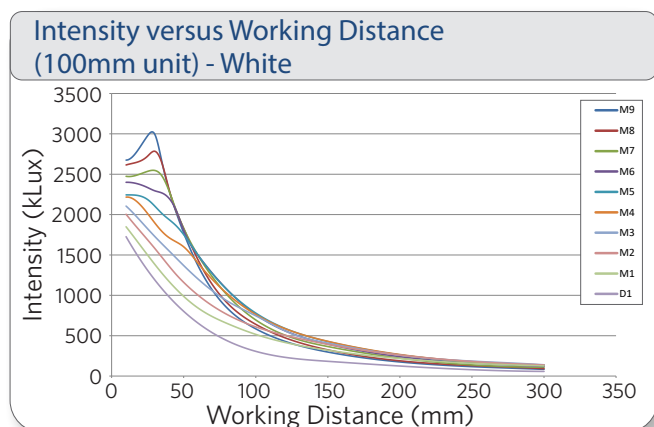
	Convection Cooled		Fan Cooled	
	COBRA Slim	COBRA Max	COBRA Slim	COBRA Max
Red	273	540	826	1740
White	853	1820	1500	3140

(1) Measured values are for continuous wave S9/M9 units,  $\geq 300$  mm in length, measured at the optimal working distance.

## COBRA Max Red - Illumination Characteristics



## COBRA Max White - Illumination Characteristics



## Part Numbers

Cooling		Configuration		Standard Wavelengths (nm)		Length (mm)	Lens Type <sup>(2)</sup>		Lens Position		Diffuser		Extrusion Type	
C	Convection	IL	Error output & analog control	0365	UV	0100	S	Slim (no microlens)	0	No Lens	D0	No Diffuser	S	Low Profile 16x80mm
T	Fan	EL	IL Options + Ethernet Connector	0395	UV	0200	M	Max (with additional microlens)	1	Nearest to the LEDs	D1	60:10 (Backlight)	L	Large Profile 40x120mm
		AL	EL Options + Strobe Capability	0470	Blue	0300			2		D2	30:1	N	No Extrusion
				0630	Red	↓			↓	↓				
				0870	Near-IR									
				1450	SWIR									
				0000	Cool White									
				XXXX	Customer defined	6000			9	Furthest from LEDs				
365-1650 nm custom wavelengths available														

Extrusion Length <sup>(3)</sup> (mm)		Connector Type <sup>(4)&amp;(5)</sup>		Cable length (m)		Cable type	
0108	1 Module	SC	Straight	01	1	B	Braided
0208	2 Module	R4	Right-Angled (Fixed Orientation)	02	2	C	Cleanroom (Solid Sheath)
0308	3 Module	A0	Right-Angled, adjustable (Upright Position)	05	5		
↓	↓	A1	45° Clockwise	15	15		
		A2	90° Clockwise	XX	Custom Length		
6008	60 Modules	↓	↓				
XXXX	Custom Lengths	A6	270° Clockwise				
		A7	315° Clockwise				

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

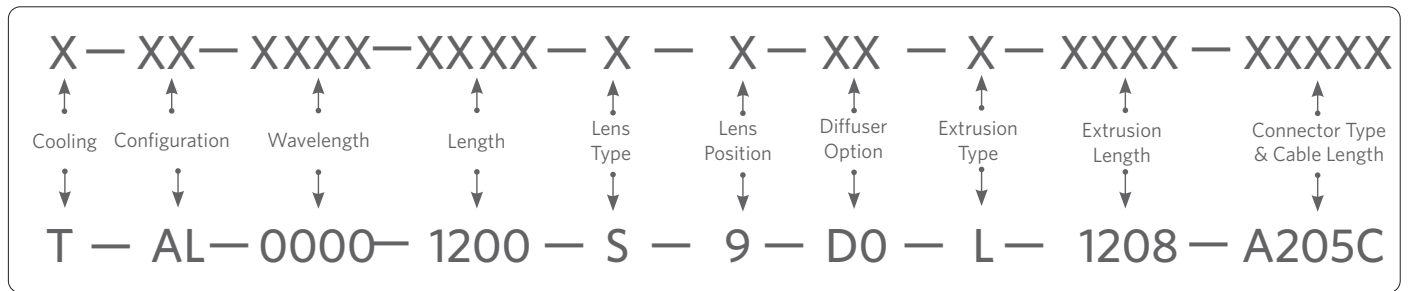
(3) Extrusion lengths are typically 8mm longer than the optical length to accommodate encaps

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

(5) 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.

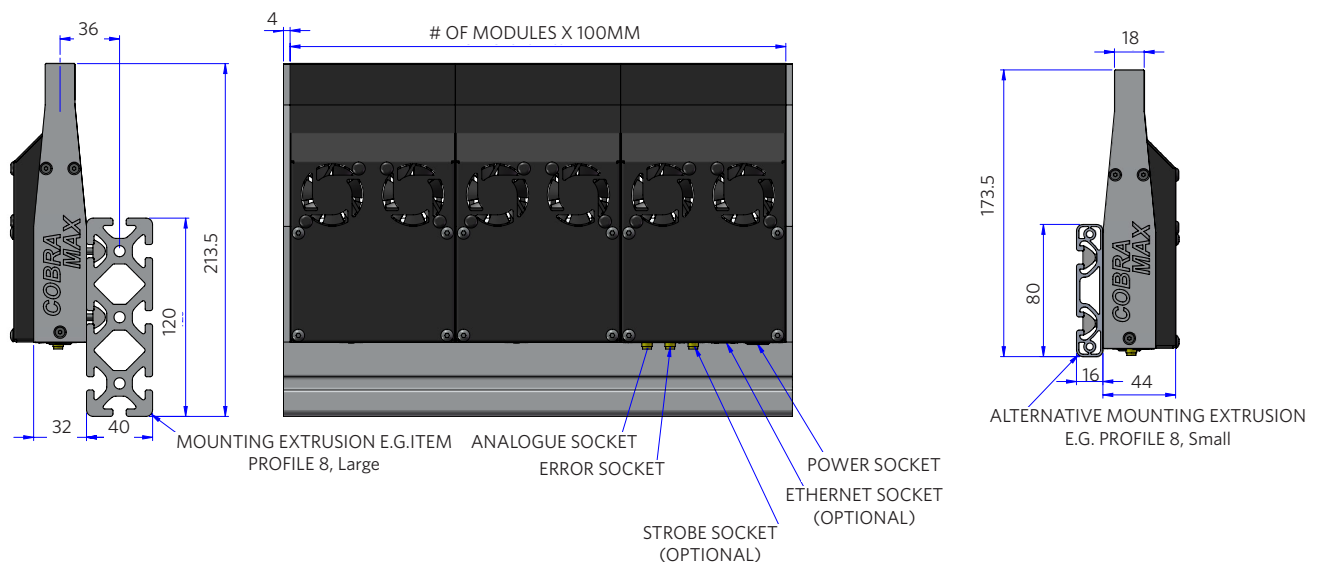
## Part Numbers

To order your COBRA Max: Select Cooling Option (X) - Select Configuration (XX) - Select Wavelength Code (XXXX) - Select Optical Length (XXXX) - Select Lens Type and Position (XX) - Select Diffuser (XX) - Select Extrusion Type (X) - Select Extrusion Length (XXXX) - Select Connector Type (XX) - Select Cable Length (XX) - Select Cable Type (X)



The above part number (for e.g.) denotes a: Fan-cooled, white COBRA Slim with Ethernet and Strobe control, 1200mm optical length, with lens in position 9 and no diffuser, mounted on a large extrusion with total length 1208mm, and supplied with 5m cleanroom-compatible cables with adjustable connector orientated 90° clockwise from vertical.

## Dimensional Diagram



For all COBRA Max longer than 100mm, standard Item brand aluminum extrusion Profile 8 is used for rigidly aligning and connecting the 100mm COBRA Max modules together. The extrusion is also used for mounting the light in the machine. Two options are available (see dimensional specifications).

ProPhotonix recommends the use of the designated 24V  $\pm$  10% power supply, which is a standard COBRA Max accessory. This part can be ordered under the part number: PSU-24V-240W-xx (where xx denotes either, EU, UK or US for mains plug variant). This power supply is supplied with hardware for mounting on DIN rail TS35/7.5 or 15. For more information, please refer to the COBRA Operations Manual.



Note: Other extrusion profile forms and dimensions available on request. Custom back plates also available on request. 100mm units do not require a mounting extrusion.

Document Revision:  
(120824)

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