

COBRA Cure™ FX3

UV LED Curing System



Compact, High-Power UV LED Curing System

COBRA Cure FX3 UV LED Curing system delivers up to 20W/cm² or 40J/cm². Ideal for UV curing of inks, coatings and adhesives. A compact, scalable UV LED lamp, COBRA Cure FX3 incorporates the many benefits of a LED curing system as well as innovative features to ensure a consistent, reliable cure over the lifetime of the system. This high-power UV lamp is available in a range of wavelengths from 365nm to 405nm.

Based on multiple 3rd party tests, the COBRA Cure FX3 offers industry leading intensity and dose values for fan-cooled systems without compromising on lifetime and reliability. This is achieved through a combination of ProPhotonix' in-house Chip-On-Board LED capabilities, in-house engineering team and over 20 years' experience in designing and manufacturing LED based systems.

The COBRA Cure FX3's design offers edge to edge illumination making the system truly scalable with minimal drop in intensity at the edges. This UV LED Lamp is offered in modules of 77mm up to 600mm in a single housing to suit your specific application requirements.

The UV LED lamps can be factory set to a customer-specified linear intensity profile and maximum intensity value for performance consistency lamp to lamp. The COBRA Cure FX3 offers excellent intensity control and long lifetimes.

Key Features

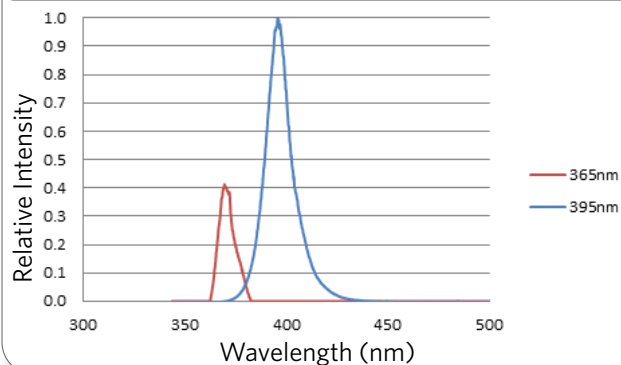
- Compact UV LED System
- Delivers Intensities of up to 20 W/cm² at 2mm
- Provides a Dose of up to 40 J/cm² at 10mm/sec.
- Instant on/off and Intensity Control
- Cold Cure – Ideal for Heat Sensitive Substrates
- No Ozone. No Mercury
- 365nm, 385nm, 395nm, 405nm Options Available

Key Applications

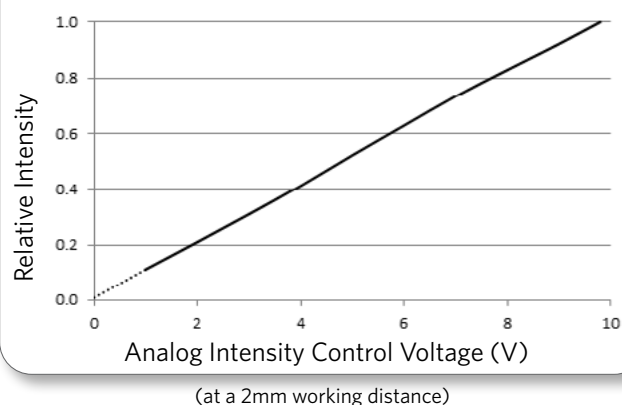
- UV Curing of:
 - Inks
 - Coatings
 - Adhesives
- Pinning of Inks
- 3D Printing

COBRA Cure FX3

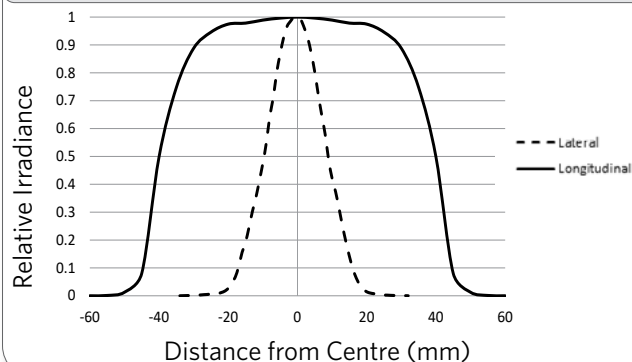
RELATIVE INTENSITY VS WAVELENGTH SPECTRUM



INTENSITY RESPONSE TO ANALOG INTENSITY CON-

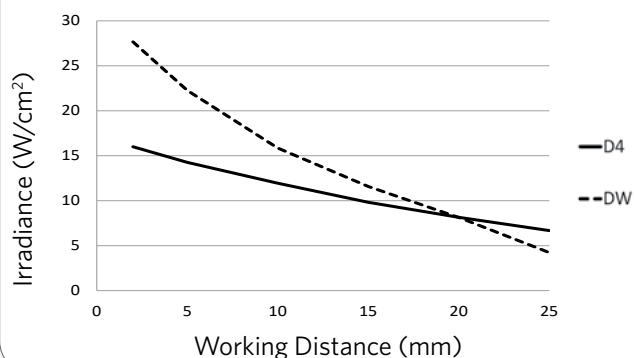


LATERAL AND LONGITUDINAL INTENSITY PROFILE



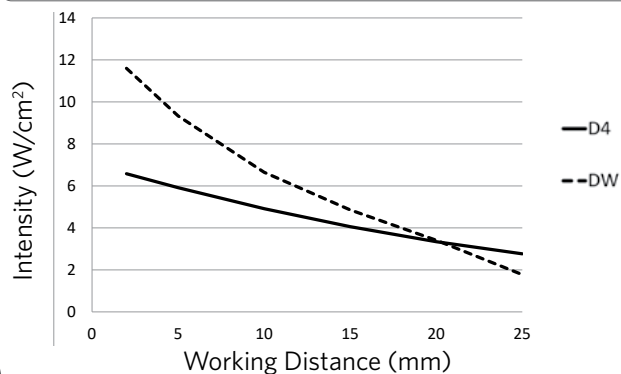
Measured at 2mm. Lateral linewidth (FWHM) approx. - 27mm.
Longitudinal linewidth (FWHM) approx. - 73mm.

INTENSITY VERSUS WORKING DISTANCE - 395NM

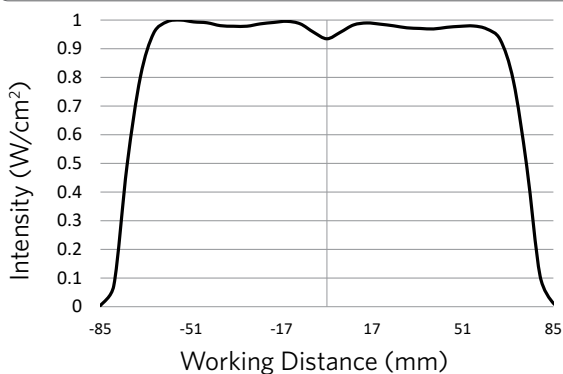


Measured at 2mm.
Linewidth (FWHM) approx. - 20mm

INTENSITY VERSUS WORKING DISTANCE - 365NM



MULTI-MODULE UNIFORMITY



The stated wavelength is the peak wavelength ± 5 nm. Working distance is the distance from the window to the point at which the intensity and dose is measured. The dose is set at the factory. The dose is measured using a Loctite Radiometer Dosimeter. It is scanned at a speed of 10mm/sec (0.6m/min).

Nominal intensity is the intensity expected at the specified dose level.

Optical Configuration	Wavelength (nm)	Working Distance (mm)	Factory set dose (J/cm ²)	Intensity (W/cm ²)
DW	395nm	2	40	20
DW	365nm	2	14	7
D4	395nm	2	30	12
D4	365nm	2	10	4

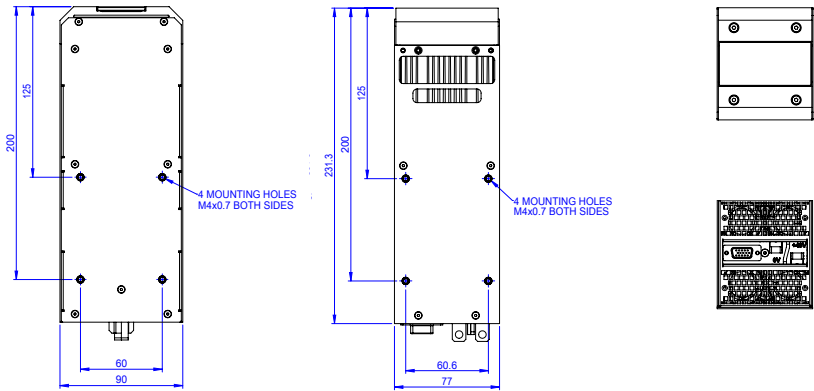
General Characteristics

Characteristic: (per 75mm module)	Value	Units
Weight	1.82	kg
Noise sound pressure level at 1m	54*	dBA ± 2dBA
Maximum operating temperature	35	°C

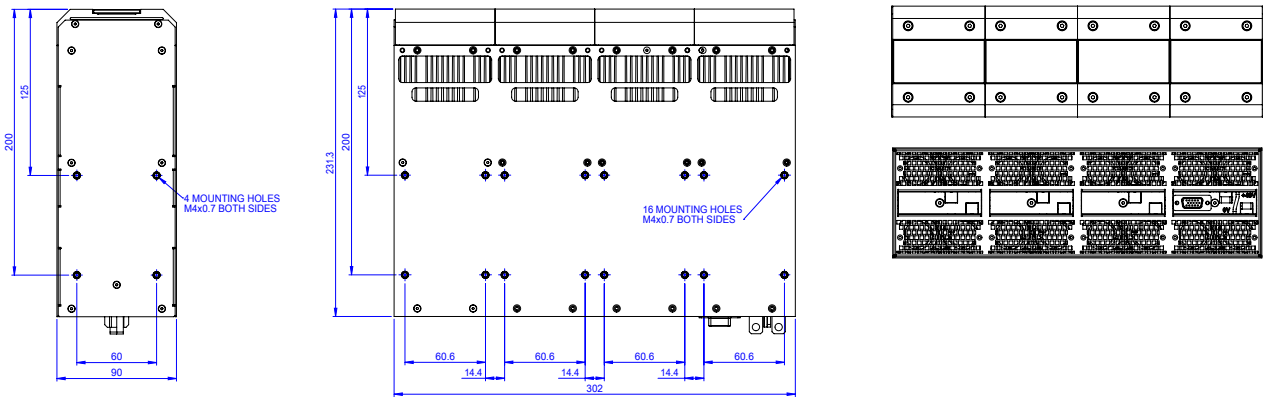
* For every subsequent module add 3dBA.

Dimensional Diagram - DW

077mm



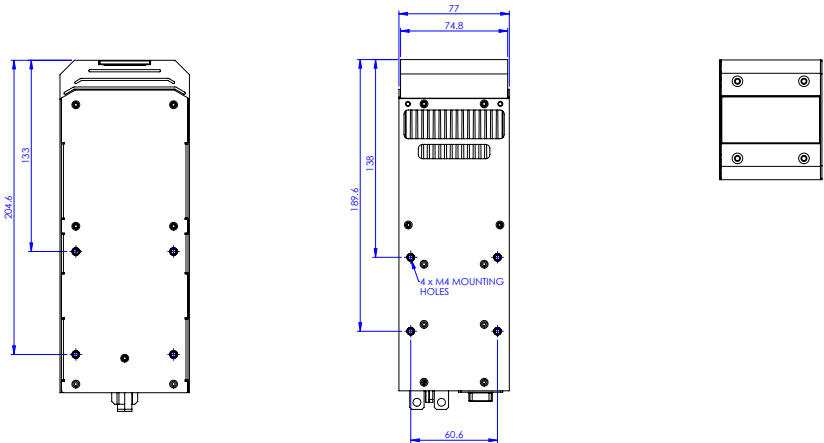
302mm



AVAILABLE IN MULTI-MODULE FORMATS IN 75MM SEGMENTS UP TO 600MM IN SINGLE MECHANICAL HOUS-

Dimensional Diagram - D4

079mm



AVAILABLE IN MULTI-MODULE FORMATS IN 75MM SEGMENTS UP TO 600MM IN SINGLE MECHANICAL HOUSINGS.

Connection Schemes

COBRA Cure FX3 lamps can be used in three basic configurations. All configurations allow the user to control the intensity of the modules.

FX3 Connected to Flying Lead Cables

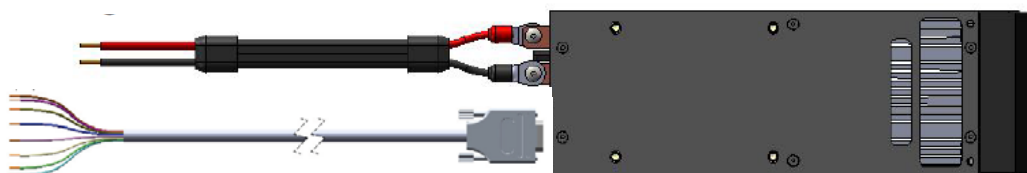
FX3-CAB-F-6R-LL

Flying Leads Power Cable

OR

FX3-CAB-4-6R-LL

M4 compatible ring Terminal Power Cable



FX2-CAB-F-CD-LL

15-way Flying Lead to DB15 Control Cable

This connection scheme allows the user to configure their own power and control scheme and connect to external power supplies and controllers. The FX3 lamp has positive and negative non-treaded Diameter 5mm sized power terminals. Standard power cables are offered in M6 or M8 sized ring terminals for connection to the power supply. These cables can be connected to the FX3 power terminals via M5 screws and appropriate nuts. The opposite ends of the cables can be offered in either flying lead or ring terminals for connection to the power supply; see Figure below.

FX3-CAB-F-6R-LL

Flying Leads Power Cable



FX3-CAB-4-6R-LL or FX3-CAB-4-8R-LL

M6 or M8 compatible ring Terminal Power Cable

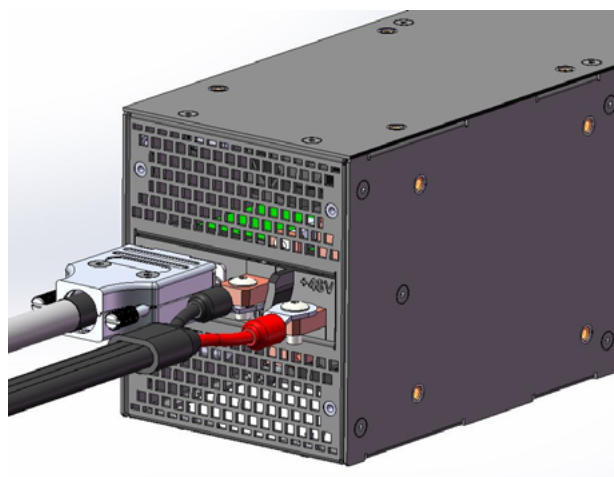


Figure. Power Cable Options for FX3 and 3D Render of connection terminals on FX3

The intensity is adjusted by varying the voltage using a 1-10V control signal on the control wire. Activation/Enable is achieved by applying a 16-24V signal on the enable wire. This connection configuration also allows the user to monitor the operating status through the lamp ready wire.

Note: 2000mm are the normal stocked lengths for these cables.

FX3 Connected to Flying Lead Power Cables and Intensity Controller with PSU

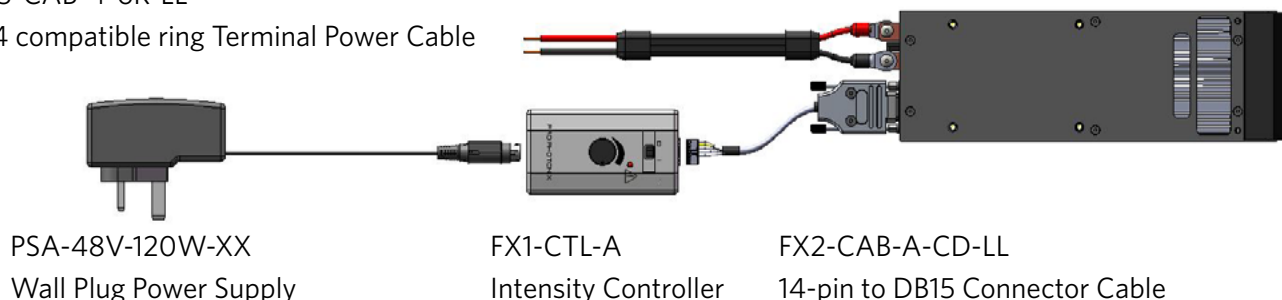
FX3-CAB-F-6R-LL

Flying Leads Power Cable

OR

FX3-CAB-4-6R-LL

M4 compatible ring Terminal Power Cable



This Connection scheme allows the user to configure their own power scheme while utilizing ProPhotonix' Intensity Controller to control the intensity of the lamp. The Intensity Controller has 2 manual inputs. The slider switch is used to activate/enable the unit and there is a rotary potentiometer to adjust the intensity. The controller also incorporates a LED light that illuminates a fault when detected.

The controller is powered by a wall plug power supply (ProPhotonix Part Number: PSA-48V-120W-XX).

Note: 2000mm are the normal stocked lengths for Flying Lead to Power Connector cables. The Wall Plug Power Supply and 14-pin to DB15 Connector cables are normally stocked in 2000mm lengths.

FX3 Connected to Flying Lead Power Cables and Intensity Controller without Flying Leads

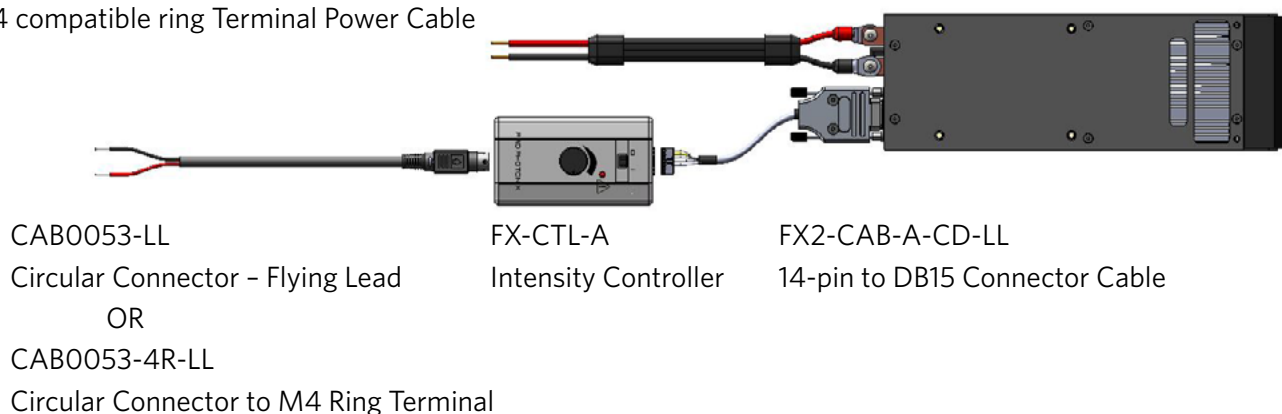
FX3-CAB-F-6R-LL

Flying Leads Power Cable

OR

FX3-CAB-4-6R-LL

M4 compatible ring Terminal Power Cable



This Connection scheme allows the user to configure their own power scheme while utilizing ProPhotonix' Intensity Controller to control the intensity of the lamp. The Intensity Controller has two manual inputs. The slider switch is used to activate/enable the unit and there is a rotary potentiometer to adjust the intensity. The controller also incorporates a LED light that illuminates a fault when detected. The controller is connected to a flying lead cable (ProPhotonix Part Number: CAB0053-LL, where LL is the length of the cable) allowing the user to configure their own power source.

Note: 2000mm are the normal stocked lengths for Flying Lead to Power Connector cables and CAB0053 cables. The Circular Connector - Flying Lead and 14-pin to DB15 Connector cables are normally stocked in 500mm lengths.

Product Code	Window Option	Length (mm)	Wavelength (nm)	Optical Configuration	Venting Option	Electrical Configuration
FX3	F-Fixed	0077	405	DW-Widest	S-Side Vented	R
		0152	395	D4-Divergent	B-Back Vented	
		0227	385			
		0302	365			

To order your COBRA Cure FX3- Use Product Code (FX3) - Select Window Option (X) -Select Length (XXXX) - Select Wavelength (XXX) - Select Optical Configuration (XX) - Select Venting Option (X) - Select Electrical Configuration (X)



Accessories	Part Number
48V Power Supply - 077 mm FX3	PSU-48V-960W-XX
48V Power Supply - 152 mm FX3	PSU-48V-02KW-XX
48V Power Supply - 227 mm FX3	PSU-48V-03KW-XX
48V Power Supply - 302 mm FX3	PSU-48V-05KW-XX
48V Power Supply - 602 mm FX3	PSU-48V-10KW-XX
Intensity Controller Power Supply	PSA-48V-024W
Flying Lead to M6 Ring Terminal Power Cable	FX3-CAB-F-6R-LL
M4 Compatible Ring Terminal to Power Cable	FX3-CAB-4-6R-LL
15-way Flying Lead to DB15 Control Cable	FX2-CAB-F-CD-LL
14-pin to DB15 Connector Cable	FX2-CAB-A-CD-LL
Intensity Controller	FX-CTL-A
Circular Connector to Flying Lead Cable	CAB0053-LL
Circular Connector to M4 Terminal Rings	CAB0053-4R-LL

XX represents the country code. Region Code: US, EU, UK. LL represents the length of the cable; see table below for nomenclature.

LL	Length
01	1m
02	2m
10	10m

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