FireEdge™ FE410

Product Specifications

SLM™, TargetCure™, WhisperCure™ Technologies

Phoseon's patented technologies encapsulate LEDs, arrays, optics and cooling to maximize UV LED curing performance. The FireEdge™ FE410 UV LED light source provides high output power in an extremely compact mechanical package for high-speed pinning and full cure applications. The FE410 UV LED source is CE, UL, RoHS, and REACH compliant.

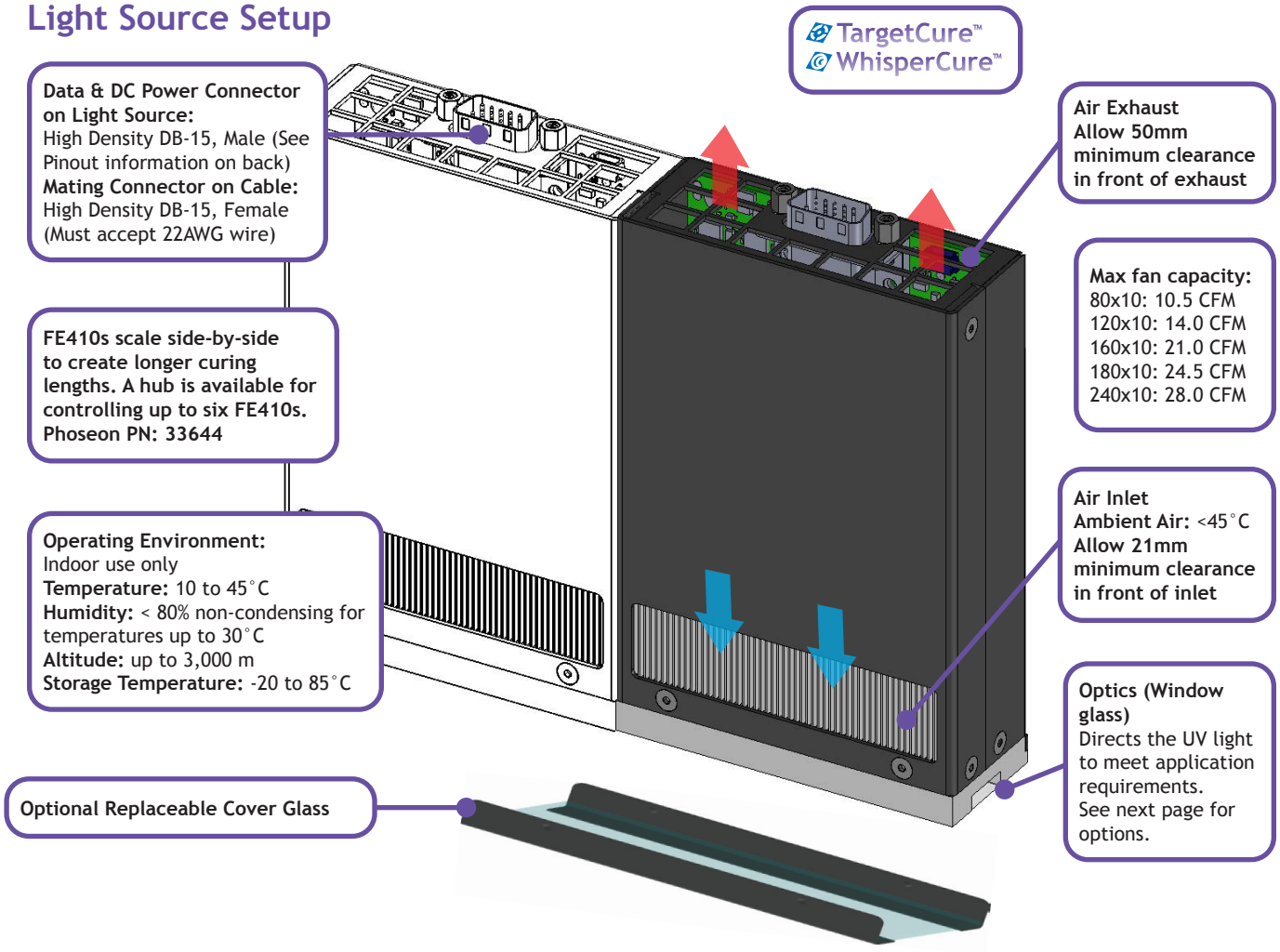
Air Cooled

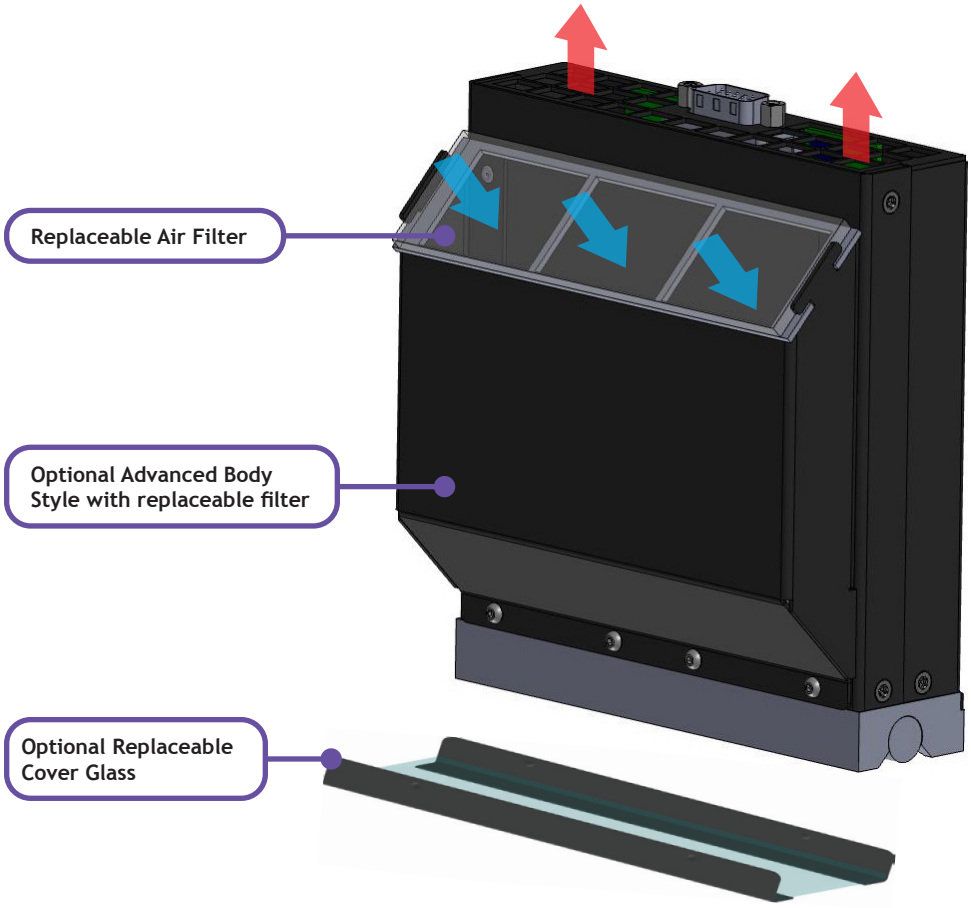
Performance

	365nm					385, 395, 405nm				
Peak Irradiance*	6W/cm²					10W/cm²				
Emitting Window (mm)	80x10	120x10	160x10	180x10	240x10	80x10	120x10	160x10	180x10	240x10
48Vdc Power In (Maximum)	143W 3.0A	227W 4.7A	269W 5.6A	322W 6.7A	432W 9.0A	201W 4.2A	280W 5.8A	385W 8.0A	401W 8.4A	502W 10.5A

*Peak Irradiance is expected to drop by 10% after replaceable cover glass is mounted.

Light Source Setup



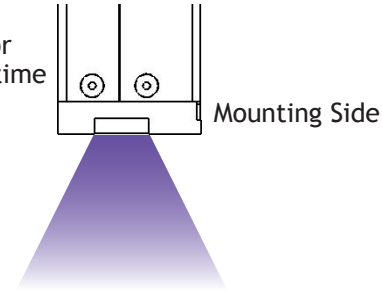


Emitting Length	Air Filter	Cover Glass
80x10mm	33538	34505
120x10mm	33539	34506
160x10mm	33540	34507
180x10mm	33543	34508
240x10mm	33541	34509

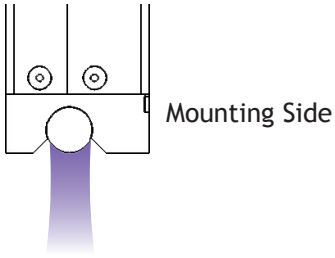
All air filters come in kits of 10.
All cover glasses come in kits of 5.

Available Optics

Flat Glass
Wide footprint for maximum dwell time



Rod Lens
Minimum light spread reduces stray light effects



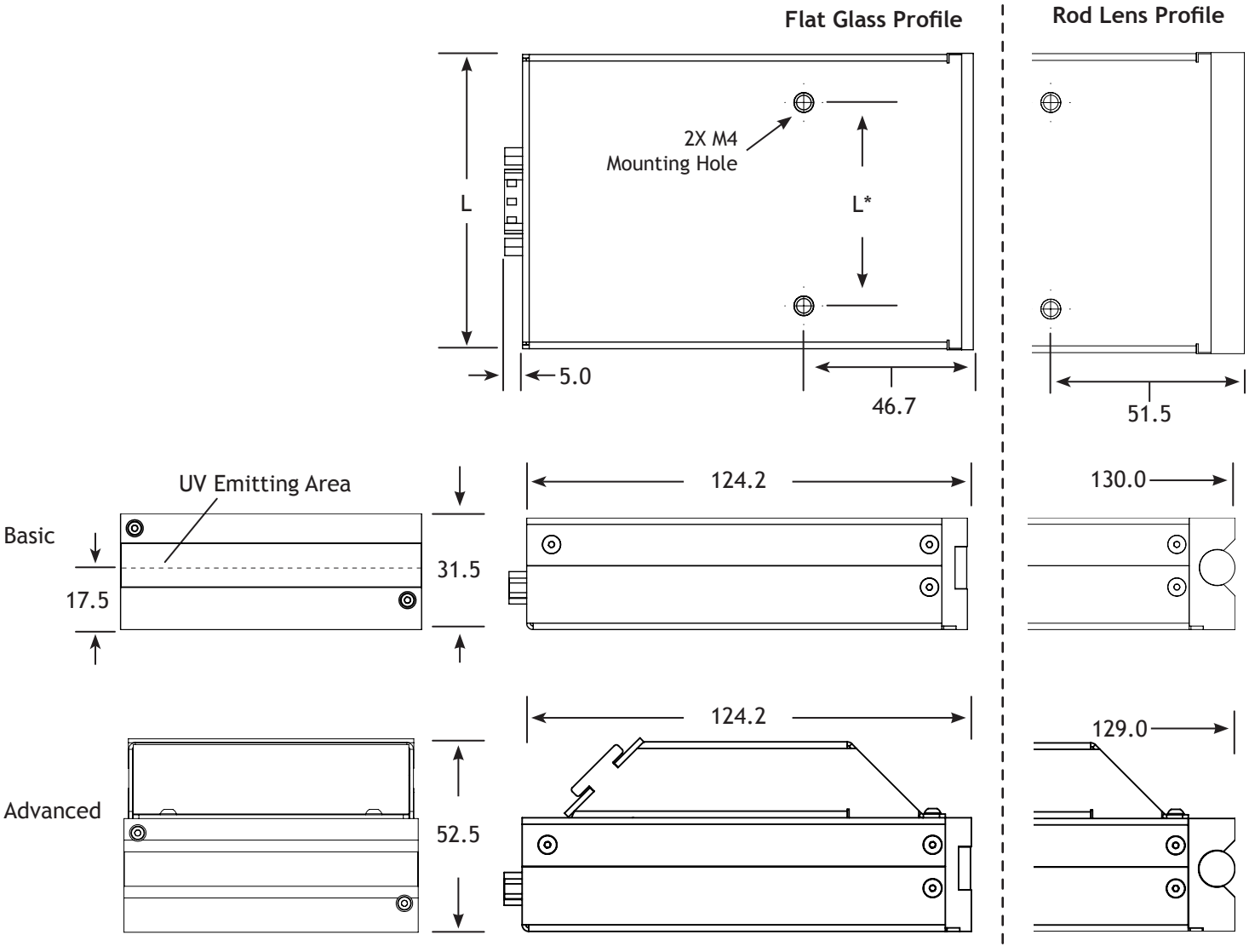
Dimensions

Units of measurement: mm

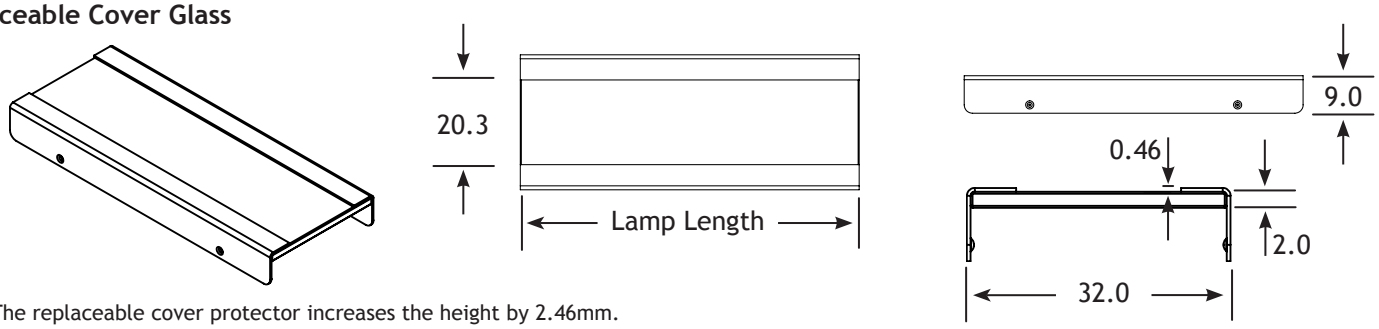
FireEdge FE410

UV Emitting Window (mm)	80x10		120x10		160x10		180x10		240x10	
Body Style	Basic	Advanced	Basic	Advanced	Basic	Advanced	Basic	Advanced	Basic	Advanced
L	81.6		121.6		161.6		181.6		241.6	
L*	56.0				116.0					
Weight (kg)										
Flat Glass	0.28	0.31	0.36	0.40	0.49	0.54	0.55	0.61	0.69	0.77
Rod Lens	0.31	0.34	0.42	0.46	0.57	0.62	0.63	0.69	0.79	0.87

L* is the distance between mounting screw holes.



Replaceable Cover Glass



Note: The replaceable cover protector increases the height by 2.46mm.

PLC Interface

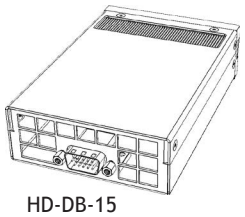
2 **Intensity Control:** (Voltage Input)
0.5V = 5% of full power, 10V = 100% of full power
The internal resistive load on this Pin is 11kΩ

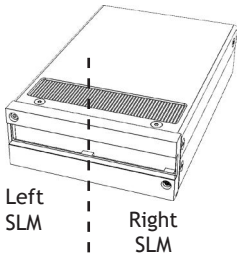
3 **Enable High:** (24V PLC Input)
0 to 4V (ground/open input) = OFF **or** 16 to 24V = ON
Refer to pin equivalent circuit for internal resistive load.

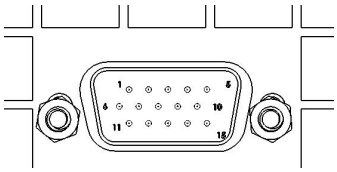
4 **Low Intensity Mode (24V PLC Input)**
0 to 4V (ground/open input) = OFF (Default Mode)
or 16 to 24V = ON (Low Intensity Mode)
In Low Intensity Mode the Peak Irradiance is reduced by a factor of 10
The internal resistive load on this Pin is 200kΩ.

	Pin 2 Intensity Control	
	0.5V (5%)	10V (100%)
Default Mode	500mW/cm²	10.0W/cm²
Low Intensity Mode	50mW/cm²	1.0W/cm²

5 **Lamp Ready:**
0 to 4V = Not Ready **or** 16 to 24V = Lamp Ready
The external resistive load on this Pin must be >3kΩ
The NOT Ready state is triggered by:
Insufficient DC Input voltage
Excessive internal temperature







7 **Disable *Left* SLM™ (24V PLC Input)**
0 to 4V (ground/open input) = OFF (Default Mode)
or 16 to 24V = ON (SLM Disabled)
Refer to pin equivalent circuit for internal resistive load.

13 **Disable *Right* SLM™ (24V PLC Input)**
0 to 4V (ground/open input) = OFF (Default Mode)
or 16 to 24V = ON (SLM Disabled)
Refer to pin equivalent circuit for internal resistive load.

1, 6, 11, 12 +48Vdc Input

8, 9, 10, 14, 15 Ground (+48Vdc Return)

Note: Low Intensity, Disable Left SLM, and Disable Right SLM are light source configuration switches. Phoseon does not recommend dynamic switching of these lines. Allow at least 250ms for the mode to enable or disable.

For Disabling/Enabling half the light source: 80mm, 120mm, 160mm, and 240mm lamps have the capability to Disable/Enable exactly half the length of the light source; 180mm lamp has a 60/120 split.

The equivalent circuits inside the FE410 UV light source are shown below: