



# **Collimated Back Light**

**Model: BL-CL** 

The Collimated Backlight Series is a high performance, uniform, and collimated light source for high precision silhouetting and transmissive applications. Using precision optics, the light is collimated in both the X and Y dimensions. The light exits at a low divergence angle making it perfect for applications requiring high precision measurements when used with a telecentric lens. Using a full array LED layout with more LEDs per square inch to provide greater intensity and uniformity. The Collimated Backlight Series is available with a wide variety of LED colors: White, Red, Green, Blue, IR, and RGB with independent color control. Active areas ranging from 1 inch x 1 inch (25 mm x 25mm) to 12 inches x 12 inches (305 mm x 305 mm). Custom sizes up to 3 feet x 3 feet (1 m x 1 m) are available.



### **FEATURES**

- High density LED array makes our backlights the brightest and most stable backlights
- Exclusive optical lens provides high uniformity (±5% to ±10%), shadow-free backlight illumination
- Patent pending thermal management design draws heat directly from the die ensuring long life
- Metaphase Technologies has the largest selection of Backlights in the vision industry.
- Options include 0 -10VDC intensity control (-Z option),
- Can be operated in either DC mode or in strobe operating using your preferred controller/driver

# **SPECIFICATIONS**

Power source 24VDC

Collimation Collimated in both X and Y

dimensions

Housing: Aluminum

Operating Temperature: -30°C to 60°C

Illuminance: 60,000 Lux (col

luminance: 60,000 Lux (consult Metaphase for possible

higher intensity)

Uniformity: ±5% Lifetime Hours: 75,000

Intensity Control: 0-10VDC and ILD dimming

control optional

### **WAVELENGTH (nanometers)**

W	White 6000K
R	Red 630 nm
G	Green 530 nm
В	Blue 470 nm
IR	Infrared 850



# **SPECIFICATIONS** (continued)

Model	Active Area (Inches)	Active Area (mm)
BL-1x1-CL-	1x1	25 x 25
BL-2x2-CL-	2x2	51 x 51
BL-3x3-CL-	2x4	51 x 102
BL-4x4-CL-	4x4	102 x 102
BL-5x5-CL-	5x5	127 x 127
BL-12x12-CL-	12x12	305 x 305

#### **APPLICATIONS**

- High precision measurements and telecentric applications
- Absence/presence of objects
- Defect detection in glass/plastic containers
- Object tracking (fish in aquarium)
- PCB (printed circuit board) assembly through-hole lead detection
- Web inspection (pin-holes in web)
- Bottle cap inspection
- Bolt/bolt thread inspection
- Glass sheet defect detection
- Sub-pixel dimensional inspection

#### **COMPLIANCE**





### **DRIVERS/OPTIONS**

- 24V for use with a standard 24V constant voltage power supply [24]
- ULC-2 for use with constant current controllers such as our ULC-2 Universal Controller [U]
- ILS configure for strobing applications with power boost for increased intensity for rising and falling edge triggers [ILS]
- Keyence compatible with Keyence light controllers such as the Keyence CA-DC21e [KEY]
- **Baumer** compatible with Baumer VeriSens cameras
- **Cognex** compatible with Cognex cameras
- Versions also available for 3<sup>rd</sup> party controllers such as: Gardasoft, Triniti, Opteon, Visics, etc.
- 0-10VDC intensity control [-Z]

#### **CONTACT US**

Contact your Metaphase Technologies representative at 215-639-8669 or your local representative for additional details, options, and customizations.