

# BL-CL

## 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 ( $\pm 5\%$  to  $\pm 10\%$ ), 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 (consult Metaphase for possible higher intensity) |
| Uniformity:            | $\pm 5\%$  |
| 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 |
| B  | 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

### 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, Trinita, Opteon, Visics, etc.
- 0-10VDC intensity control [**-Z**]

### COMPLIANCE



### CONTACT US

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