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For applications that require higher intensity and/or larger coverage area, Metaphase has developed a High intensity illuminator that mounts & interfaces directly to all the popular readers including, but not limited to Keyence, Cognex, Sick and Dalsa readers. By simply configuring the light with the appropriate mounting plate, it can be mounted directly to your image-based reader of choice. The light can be used in continuous & strobe mode and provides illumination intensity for maximum read rates. These illuminators can be configured with the LED color/lensing/diffuser/polarizing required to provide a homogenous, high intensity, non-glare image to maximize code-to-background contrast. Metaphase family of Barcode/OCR reader lights include 7-inch (178mm) and 14-inch (356mm) versions.

FEATURES
• High power LEDs
• Rugged design
• LED thermal management for stable performance
• Strobe and dimming options available
• Flicker free performance and instant start up with Metaphase analog driver technology
• Built-in Constant Current Driver with 0 – 10VDC intensity control

WAVELENGTHS	
Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
IR940	Infrared / 940nm
UV365	Ultraviolet Short / 365nm
UV395	Ultraviolet Long / 395nm

GENERAL SPECIFICATIONS	
Power Source:	24VDC ±5%
Cable (Standard):	10-foot cable with flying leads
Housing:	Black Anodized Aluminum
Ambient Temp:	-20°C to 40°C
Lifetime Expectancy:	75,000 hours (except UV)

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Barcode Lights							
MODEL	All models: H = 2.82 inches (7.2cm) **Overall Width and Length** Inches (cm)	Total Active Area Inches (cm)	Weight lbs / kg	Cable QTY	Cable Length	Cable Description (Single Wavelength)	Input Current @24VDC (Red)
BCL406	3.75 x 8.28 (9.53 x 22.3)	4.54 x 2.76 (11.5 x 7.01)	2.0 / 0.91	1	10ft	24 AWG 4 Conductor	0.5 amps
BCL806	3.75 x 15.55 (9.53 x 39.50)	11.30 x 2.76 (28.70 x 7.01)	4.37 / 1.98			18 AWG 4 Conductor	1.7 amps

Wiring (4 conductors, flying leads)**	
Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

Wiring (4 conductors, without Intensity Control)	
Wire Color	Function
RED	+24VDC
WHITE	+24VDC
BLACK	GROUND (24V RTN)
GREEN	GROUND (24V RTN)

M12 (5 position male)**	
Pin #	Function
1	+24VDC
2	0-10VDC Intensity Control
3	GROUND (24V RTN)
4	SIGNAL GROUND
5	No Connection

The M12 connector option is not recommended for lights rated more than 4 amps

Wiring with ULC-2	
Wire Color	Function
RED, WHITE (+)	LED INPUT
BLACK, GREEN (-)	

Terminated within a 2 position ULC-2 output connector (Phoenix Contact P/N: BCP-508-2)

**Note: The 0-10VDC Intensity Control input can accept voltages from 0-24VDC where the light will operate at full intensity in the 10-24VDC range. The light is proportionally dimmer for any Intensity Control voltage less than 10VDC and the light is OFF at approximately 0V or not connected (floating).

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Barcode Lights   PRODUCT DATA SHEET

METAPHASE LIGHTING TECHNOLOGIES

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PART NUMBER KEY											
MODEL	SIZE	-	CAMERA	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most Common)
BCL	XXX	-	XXXXX	-	XXXXX	-	XXXXX	-	XXX	-	XXXX
BCL	**406** **806**		**ACE** **BOA** **DM360** **DM500** **KBAR** **MAKOGC** **MV20** **MV30** **MV40** **SR2K**		**W** (White 6000K, Nominal) **R** (Red 630nm) **G** (Green 530nm) **B** (Blue 470nm) **IR850** (Infrared 850nm) **IR940** (Infrared 940nm) **UV365** (UV Short 365nm) **UV395** (UV Long 395nm)		**24Z** **24-ILZ** **24-ILD** **24Z-TRG**		**5M** **10M** Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		**M12D**[1][2] **BC**[1][3] Select or leave blank for flying leads

Example 1: **BCL406-MV30-R-24Z**
Example 2: **BCL806-ACE-R-24Z**

[1]Not available in lights exceeding 4A input current
[2]Default cable length for an M12D connector is 19 inches
[3]Default cable length for a Barrel Connector is 10 feet

Contact Metaphase Technologies or your local representative for options such as custom diffusers, lenses, polarizers, IP-rated enclosures for harsh environments, higher intensity, custom wavelengths, higher uniformity, etc. Not all options are available for all lights.

*(Link to Driver Options Key)   **(Link to Connector Key)

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Sample Part Number: **BCL406-DM360-R-24Z**

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	7/9/2018	

2.27 [57.5] ACTIVE

2.27 [57.5] ACTIVE

POWER CABLE
18 AWG Stranded; 4 Conductor
w/ flying leadwire ends; 10' Lg.

2.76 ACTIVE

2.5 [63.3]

[70.1]

.35 [8.9]

8.19 [208.1]

8.78 [223]

0.19 Slots Thru

2.82 [71.7]

1.75 [44.5]

3.14 [79.8]

3.75 [95.3]

2.50 [63.5]

Camera Mounting Plate
Adjustable / Replaceable

SECTION A-A
SCALE 1 : 2

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977

QUANTITY:	Per order
MATERIAL:	Aluminum
FINISH:	Black Anodize
TREATMENT:	N/A

TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED
INCHES [MM]

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TITLE: Diffused Front Light

USED ON: Per customer

Approval Signature

Date

SIZE B | DRAWING NUMBER BCL406-DM360-1 | REV A
SCALE 1:4 | SHEET 1 OF 1

CONTACT US

For more information please contact:

BOCK OPTRONICS INC.
14 Steinway Blvd., Unit 7
Toronto, Ontario   M9W 6M6

Tel: (416) 674-2804
sales@bockoptronics.ca
www.bockoptronics.ca

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