

## RAL

Our Round Area Front Light is a proven design with thousands of installations around the world. Manufactured from a solid one-piece machined aluminum housing with thermal potting assures long life performance in rugged environments.



### FEATURES

- Homogenous light output that provides high intensity illumination
- Shock and vibration resistant
- LED thermal management for stable performance
- Industry proven for virtually any lighting application
- Flicker-free performance and instant start up with Metaphase analog driver technology
- Economical, low cost
- An ideal light for many applications
- Optional Constant Current Driver with 0-10VDC intensity control, compatible with DDC-3 and ILD-35 Dimmers

### WAVELENGTHS

Order ID	Description / nanometers
<b>W</b>	White (6000K), Nominal
<b>R</b>	Red / 630nm
<b>G</b>	Green / 530nm
<b>B</b>	Blue / 470nm
<b>IR880</b>	Infrared / 880nm
<b>UV365</b>	Ultraviolet Short / 365nm
<b>UV395</b>	Ultraviolet Long / 395nm

### GENERAL SPECIFICATIONS

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

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Round Area Front Light							
MODEL	Dimensions L x OD(Ø) Inches (mm)	Lens Diameter Inches (mm)	Weight (includes cable) lbs (grams)	Cable QTY	Cable Length	Cable Description	Max Input Current @24VDC
RAL050	1.88 x .90 (47.8 x 22.9)	.67 (17.0)	.27 (120)	1	10ft	24 AWG 4 Wire	100mA
RAL101	2.10 x 1.50 (53.3 x 38.1)	1.25 (31.75)	.45 (205)				150mA
RAL105	2.10 x 1.50 (53.3 x 38.1)	1.10 (27.94)	.43 (195)				150mA
RAL201	1.50 x 2.13 (38.1 x 54.0)	1.77 (45.0)	.50 (227)				200mA

Wiring (4 conductor with Intensity Control)**	
Wire Color	Function
RED	+24VDC
WHITE	0-10VDC INTENSITY CONTROL
BLACK	GROUND (24V RTN)
GREEN	SIGNAL GROUND

Wiring (4 conductor 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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PART NUMBER KEY									
MODEL	SIZE (outside diameter)	-	WAVELENGTH	-	DRIVER* (most common)	-	CABLE LENGTH	-	CONN.** (most common)
RAL	XXX	-	XXXXX	-	XXXXXXXX	-	XXX	-	XXXX
<b>RAL</b>	<b>050</b> (.90") <b>101</b> (1.0") <b>105</b> (1.5") <b>201</b> (2.1")		<b>W</b> (White 6000K, Nominal) <b>R</b> (Red 630nm) <b>G</b> (Green 530nm) <b>B</b> (Blue 470nm) <b>IR880</b> (Infrared 880nm) <b>UV365</b> (UV Short 365nm) <b>UV395</b> (UV Long 395nm)		<b>24CV</b> <b>24-ILSXXX</b> <b>24-ILD</b> <b>U<sup>1</sup></b> <b>24Z</b>		<b>5M</b> <b>10M</b>  Length can be customized: ex.7M=7meters  Select or leave blank for 3 meters		<b>M12D<sup>1 2</sup></b> <b>BC<sup>1 3</sup></b>  Select or leave blank for flying leads
Example 1: <b>RAL050-W-24CV</b> Example 2: <b>RAL201-R-24-ILD</b>					<sup>1</sup> Not available in lights exceeding 4A input current <sup>2</sup> Default cable length for an M12D connector is 19 inches <sup>3</sup> 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.

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Sample Part Number: **RAL201-R-24CV**

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	4/2/2016	
B	Redrawn in Solidworks, ECR #0020, KW	2/8/2012	
C	"QC'd design, added tolerances, redrawn"	4/5/2016	

  

LENS OPENING  
Ø 1.77 [45.01]

1.50 [38.10]

Ø 2.13 [53.98]

.32 [8.13]

.33 [8.26]

.37 [9.35]  
M5 MOUNTING STUD

POWER CABLE

SEE SHEET 2 FOR EXPLODED VIEW AND BOM

Metaphase Technologies, Inc. 211 Sinclair Road, Suite 100, Bristol, PA. 19007 215-639-8699 Fax 215-639-0977			
QUANTITY: Per order	TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED	THIS DOCUMENT IS THE PROPERTY OF METAPHASE TECHNOLOGIES, INC. WHOM MAY LOAN IT. SUBJECT TO RETURN UPON DEMAND. IT INCLUDES CONFIDENTIAL & PROPRIETARY INFORMATION WHICH MAY NOT BE DISCLOSED TO ANY THIRD PARTY, AND/OR USED FOR ANY PURPOSE CONTRARY TO ITS INTENDED USE, WITHOUT THE EXPRESSED PRIOR WRITTEN CONSENT OF METAPHASE TECHNOLOGIES, INC.	
MATERIAL: Per BOM	INCHES (MM)		
FINISH: Black Anodize	±.001 [±.025] ±.005 [±.127] ±.008 [±.203] ANGLES ±1°		
TREATMENT: N/A			
Approval Signature _____	Date / / _____	TITLE: Round Area Light; 2.1" USED OR: Per customer SIZE: B SCALE: 1:4 SHEET 1 OF 2	

**COMPLIANCE**



**CONTACT US**

Contact Pyramid Imaging at **813-984-0125** or your local representative for additional details, options and customizations.