

DL Series Dome Lights



- ◆ **Excellent for highly reflective surfaces** and textured objects
- ◆ **Integrated driver** constant current driver with 0-10 VDC intensity control
- ◆ **Optical grade reflector coating** reflects 98% of light for optimal output
- ◆ **High-intensity, uniform, non-directional** illumination for area scan

Features

- **Wide variety of LED colors** including Single-Color , UV, IR, SWIR, and RGB
- **Dome sizes range from 178 to 1105 mm in internal diameter**
- **Three camera port sizes, 32, 45, and 72 mm, standard across all dome sizes**
- **Thermal management for consistent performance**

The DL Series Difference

The DL Series dome lights provide intense, evenly diffused illumination. The diffused dome light is ideal for inspection of reflective, specular, rough, or topographic surfaces. Optical grade reflector coating returns 99.9% of light for optimum diffused output. These lights are available with a wide variety of LED colors such as white, red, green, blue, IR, UV (365nm and 395nm), and RGB.

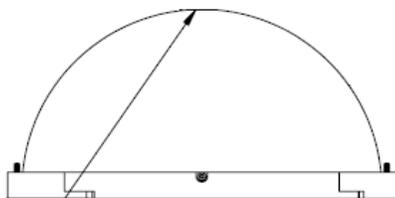


TABLE 1: PART NUMBER KEY

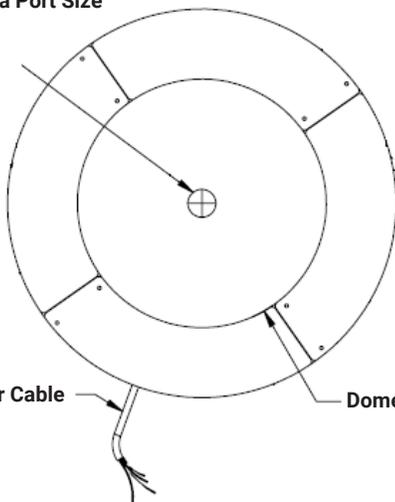
Contact your Metaphase Sales representative for custom versions (wavelengths, connectors, sizes, etc).

Family	Port Size	Model	Dome Size	Color	Cable *
DL	X	X	XX	XXXX	XXX
	1 - 32 mm	B - 24 VDC, 0-10V control	07 - 178 mm ID	W (White, 6500K)	3.0M - Standard
	2 - 45 mm		12 - 295 mm ID	R (Red 630nm) G (Green 530nm) B (Blue 470nm)	5.0M - 5 meter option
	3 - 72 mm		18 - 422 mm ID	RGB	10.0M - 10 meter option
			28 - 692 mm ID	UV395	
			30 - 750 mm ID	UV365	
			35 - 878 mm ID	IR940	
				IR850	
			44 - 1105 mm ID	IR05 (SWIR 1050)	
				IR20 (SWIR 1200)	
				IR30 (SWIR 1300)	
				IR45 (SWIR 1450)	
				IR55 (SWIR 1550)	
				IR65 (SWIR 1650)	

***NOTE** - Initial release of the DL series includes a standard 3 meter cable with flying leads. If an additional length is required outside of the standard 3 meter cable, 5 and 10 meter options are also available. For any additional needs, please consult your Metaphase representative.

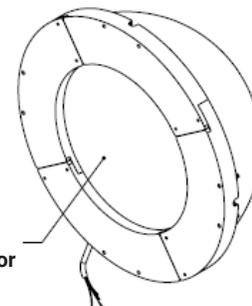


Camera Port Size



Power Cable

Dome Size (Internal Diameter)



Dome Interior is painted brilliant white for superior reflection.



General	
Operating Temperature:	0-40°C, 90% RH, non-condensing
Storage Temperature:	0-70°C, 90% RH, non-condensing
Compliance:	RoHs, CE, IEC 62471
Photobiological Risk Factor:	Contact Metaphase for wavelength specific testing.
Electrical	
Input Voltage:	24VDC+/-5%
0-10V Dimming Control:	Off: 0V Turn-on Threshold: 0.5V 100% Intensity: 10V Max Allowance Voltage: 24V Input Impedance: 14kΩ

CONTROL WIRING

4 Conductor Flying Lead Cable	
Wire Color	Description
RED	+24 VDC
WHITE	0 - 10 VDC Intensity Control*
BLACK	Ground (24 VDC Return)
GREEN	Signal Ground

Light Operation:

The light will illuminate at full intensity when 24VDC is applied to the +24VDC line, and 10-24VDC is applied to the 0-10V dimming line.

The light can be dimmed by proportionally applying a voltage less than 10VDC to the 0-10VDC intensity control.



DL Series Overall Dimensions

DL Dome Lights			
Part Number	Inner Diameter (mm)	Outer Diameter (mm)	Dome Height (mm)
DL07	178	278	135
DL12	295	485	210
DL18	422	605	272
DL28	692	894	421
DL30	750	945	444
DL35	878	1073	525
DL44	1105	1300	622

Please consult Metaphase for detailed engineering drawings of each product for further definition.

SAMPLE DRAWING: DL12xx

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	7/11/2005	KYS

Size Units in MM [XX]

Size Units in MM [XX]	Part Number
32	DL1232
45	DL1245
70	DL1270

Technical Drawing Details:

- 8.25 [209.66] (Dome Height)
- .75 [19.05] (Mounting Hole Depth)
- Ø 19.08 O.D. [484.62] (Outer Diameter)
- Ø 11.63 I.D. [295.28] (Inner Diameter)
- MOUNTING HOLES Ø .35 [9] THRU ALL
- ✓ Ø .71 [17.92] X 90°
- MOUNTING HOLE DIA. Ø 18.13 [460.47]
- 22.50° TYP. (Mounting Hole Angle)
- CAMERA HOLE DIA. [XX]
- POWER CORD 24 AWG STRANDED; 4 CONDUCTOR W/ FLYING LEADWIRE ENDS; 10' LG. -.180" OD
- DOME INTERIOR IS PAINTED BRILLIANT WHITE FOR SUPERIOR REFLECTION.

Metaphase Technologies, Inc. 200 Rittenhouse Circle, Unit 7, Bristol, PA. 19007 215-639-8699 Fax 215-839-0977

SEE SHEET 2 FOR EXPLODED VIEW AND BOM.

Approval Signature: _____ Date: / /

QUANTITY: PER ORDER
MATERIAL: PER ASSY.
FINISH: N/A
TREATMENT: N/A

TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED

INCHES (MM)		125V RMS (RA3.2UM)	
X	X	XX	XXX
[±.76]	[±.030 [±.25]	[±.010 [±.13]	±.005
		ANGLE±1°	

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METAPHASE LIGHTING TECHNOLOGIES

TITLE: DOME LIGHT, 295MM I.D.

USED ON: DL12XX

SIZE: B DRAWING NUMBER: DL12 REV: A

SCALE 1:12 SHEET 1 OF 3



For nearly two decades, Metaphase Technologies has been developing products that implement “The Quality of Light” through engineering and manufacture of cutting-edge LED illuminators for machine vision, military, and specialty lighting applications.

We're proud of our demonstrated expertise engineering flexible lighting solutions that have facilitated integration into thousands of vision systems designs.

Throughout the world, Metaphase clients enjoy the enhanced automation and image capture benefits of our patent-pending breakthroughs in uniform diffuse high brightness and ultra-brightness LED illumination.

First to implement built-in constant current drivers across multiple product lines, Metaphase continues to synergize cutting-edge LED lighting & control technologies that streamline innovation and increase return on investment.

Made in the USA for nearly 30 years, our versatile designs are continuously updated to incorporate the latest advances in LEDs, thermal management, optics, and electronic technologies to meet the challenging needs of today's global automation and scientific marketplace.

Contact us to see how Metaphase can help with your cutting-edge lighting needs.



200 Rittenhouse Circle, West Unit 7, Bristol, PA 19007 USA
+1-215-639-8699 www.metaphase-tech.com

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