

HP-LPP

The Metaphase Technologies High Power LED Pattern Projector is designed to give the most accurate measurements in 3D profiling applications. Traditional lasers typically exhibit poor line sharpness and power distribution. By utilizing precision LED patterns and optics, a focused structured light can illuminate a sample from overhead or at the angle needed to provide the 3rd dimension information.

The LED Pattern Projector illuminates a variety of patterns at different working distances. Paired with a lens and pattern reticle, the HP-LPP is ideal for structured light applications. The device intensity can be controlled with a 0-10V intensity control signal. Optional automated (DDC-3) or manual dimmers are available.



FEATURES

- Project patterns with < 1µm edge sharpness which provides superior illumination over lasers
- Pattern options include crosshair, stripes, grid, edge & line, and custom patterns
- LED thermal management for stable performance
- Designed for structured light applications
- Constant Current Driver with 0 – 10VDC intensity control, compatible with DDC-3 and ILD-35 Dimmers

WAVELENGTHS

Order ID	Description / nanometers
W	White (6000K), Nominal
R	Red / 630nm
G	Green / 530nm
B	Blue / 470nm
IR850	Infrared / 850nm
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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Pattern Projector							
MODEL	Length Inches (mm)	Lens Diameter Inches (mm)	Weight lbs (grams)	Cable QTY	Cable Length	Cable Description	Max Input Current
HP-LPP	4.0 (101.6)	.827 (21)	0.5 (227)	1	10ft	24 AWG 4 conductors	0.6 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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PART NUMBER KEY											
MODEL	-	WAVELENGTH	-	DRIVER* (most common)	-	LENS (Reticle)	-	CABLE LENGTH	-	CONN.** (most common)	
HP-LPP	-	XXXXX	-	XXXXXXXX	-	XX	-	XXX	-	XXXX	
HP-LPP		W (White 6000K, Nominal) R (Red 630nm) G (Green 530nm) B (Blue 470nm) IR850 (Infrared 850nm) UV365 (UV Short 365nm) UV395 (UV Long 395nm)		24Z 24NZ 24-ILSXXX 24-ILD U¹		RETN (None) RETL (Line) RETS (Stripes) RETG (Grid) RETC (Cross) RETE (Edge)		5M 10M Length can be customized: ex.7M=7meters Select or leave blank for 3 meters		M12D^{1 2} Select or leave blank for flying leads	
Example 1: HP-LPP-R-24Z-RETG				Example 2: HP-LPP-B-24Z-RETC-M12D				¹ Not available in lights exceeding 4A input current ² Default cable length for an M12D connector is 19 inches			

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.

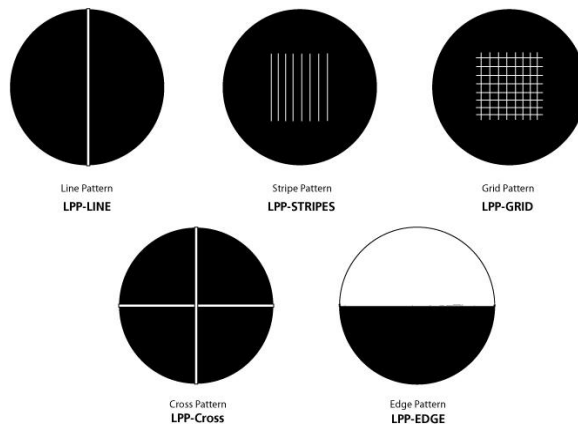
Focal Lens Selection

A = Diameter of Area

	60mm	100mm	150mm	200mm	300mm	400mm	500mm
100mm		8	6				
150mm		12	8	6			
200mm	25	16	12	8	6		
300mm		25	16	12	8	6	
400mm		35	25	16	12	8	6
500mm	50	35	25	16	12	8	
600mm		50	35	25	16	12	8
750mm		50	35	25	16	12	12
1000mm			50	35	25	16	16
1500mm			75	50	35	25	25
2000mm				100	50	35	25

Shaded Cells represent the focal length of lens

Standard Patterns



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Sample Part Number: **HP-LPP-R-24Z-RETG**

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	REVISED AND REFORMATTED LESSO ASSEMBLY	7/17/2017	

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QUANTITY: Per order	TOLERANCE/FINISH UNLESS OTHERWISE SPECIFIED	
MATERIAL: Per BOM	INCHES (MM)	
FINISH: Black Anodize	±.005 [±.127] ±.010 [±.254] ±.005 [±.127] ANGLES ±1°	
TREATMENT: N/A		TITLE: ASSEMBLY, HP-LPP USED ON: Per customer SIZE: B DRAWING NUMBER: HP-LPP-01 REV: A SCALE: 1:2 SHEET 1 OF 1

COMPLIANCE



CONTACT US

Contact Metaphase Technologies at **215-639-8699** or your local representative for additional details, options and customizations.