

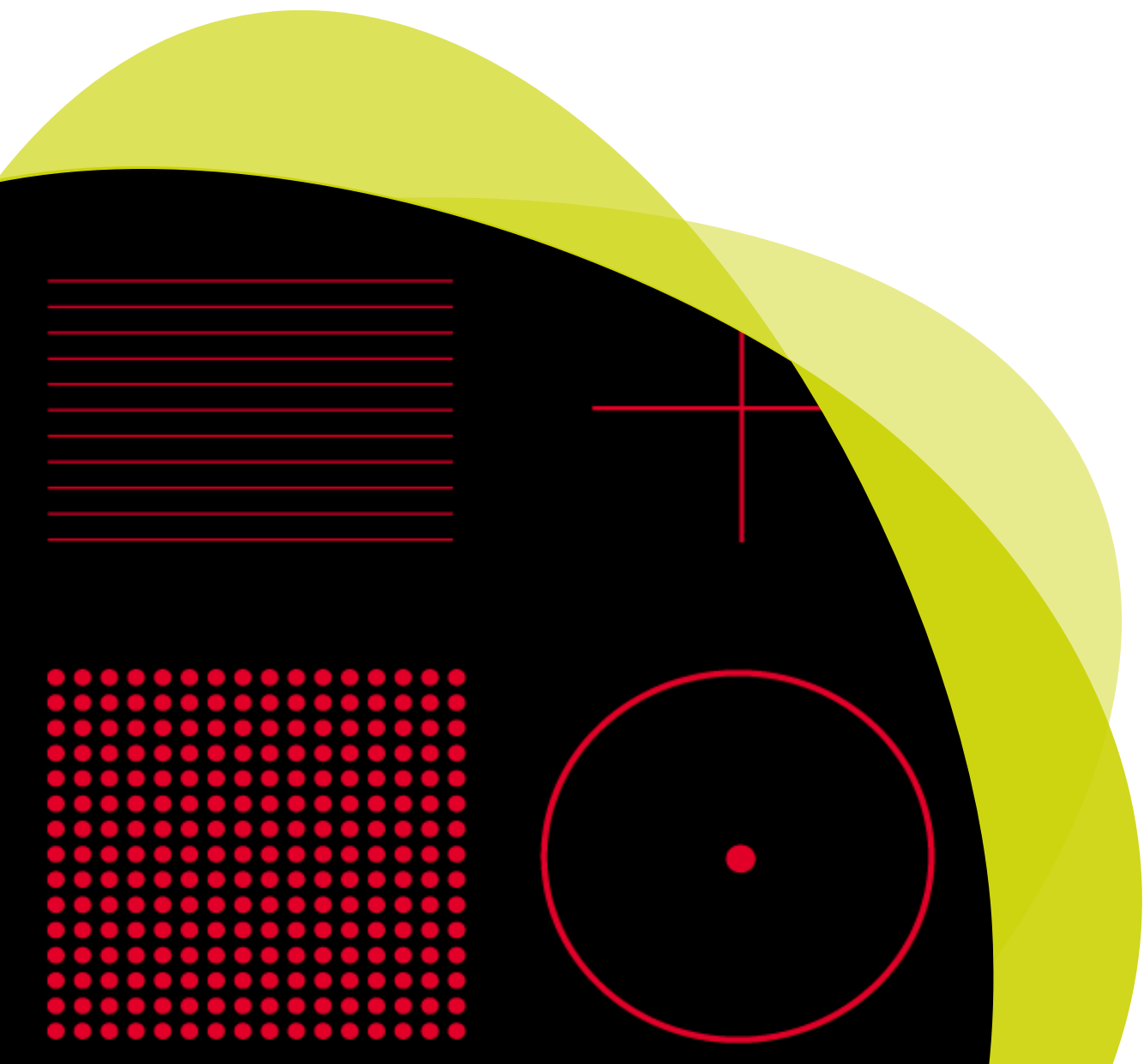


# Projection Lenses

premier & acculase modulatable/machine vision lyte-mv/dragonfly green/  
imatronic/laserlyte/laserlyte-flex/guideline/hawkeye detector/  
firefly green/firefly green mini/thread mountable cameo/15mm blue/  
survelase/survelase maxi/beta tx/bluelyte/varilite lc/dca/microblock/  
accessories/**projection lenses**/energy efficient/customised solutions.

# Projection Options

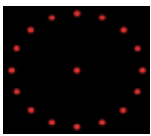

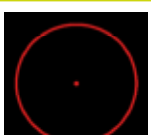
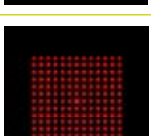





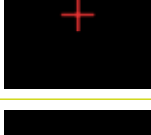
Global Laser are able to offer a wide range of diffractive optical elements (DOE) to provide various patterns such as crosses, circles & dot arrays for applications such as 3D mapping, surface texture analysis, alignment & general machine vision applications. They are available as standard options for many of our laser diode modules.

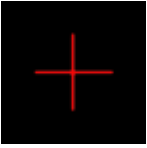
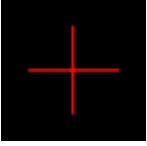
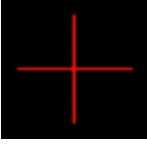
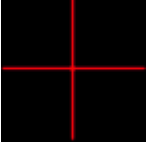



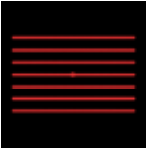
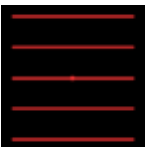







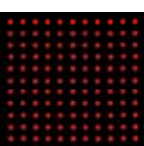


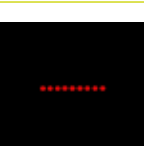
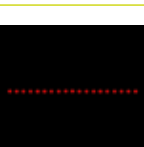
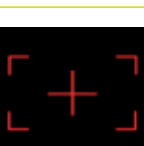
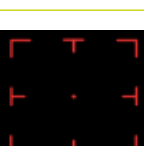

# Technical Specification

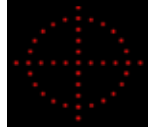
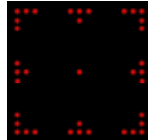
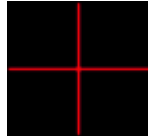
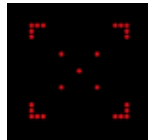

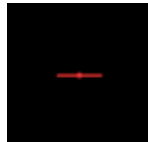

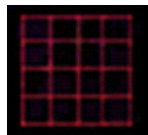
The below DOE's can be used with the following Laser Diode Modules:

Cameo, Lyte-MV, Lyte-MV-Excel, Greenlyte-MV-Excel, Premier, Acculase, FireFly, GreenLyte and LDM115.


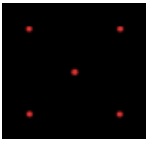
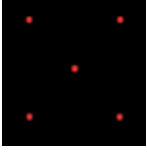


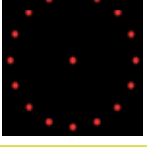
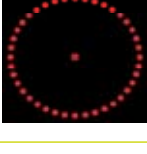
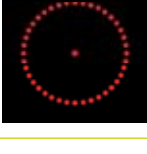
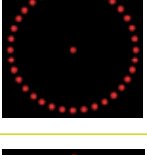
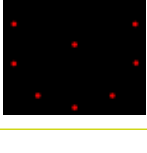
Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Zero Order Intensity @ 635nm	Image
1:16 Dot Circle	633nm	10.8	10.8	2.1	0.50%	
1:72 Dot Circle	488nm	25	25	1.11	11%	
Circle	543nm	34	34	N/A	8%	
13 by 13 Dot Array	633nm	3.8	3.8	0.31	0.10%	
16 by 16 Dot Array	633nm	5	5	0.34	0.60%	
17 by 17 Dot Array	633nm	5	5	0.31	0.10%	
17 by 17 Dot Array	633nm	14.6	14.6	0.9	0.10%	
21 by 21 Dot Array	633nm	4.8	4.8	0.24	0.30%	
Cross	594nm	5	5	N/A	3.90%	
Cross	633nm	10	10	N/A	0.10%	

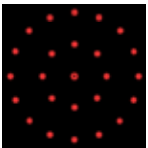

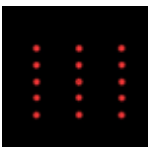
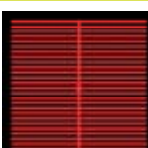
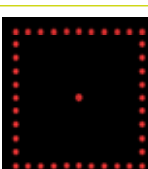

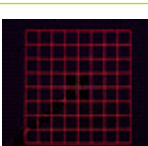
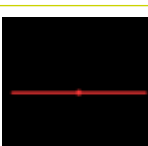
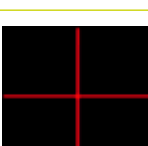
Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Zero Order Intensity @ 635nm	Image
Cross	543nm	15	15	N/A	4.40%	
Cross	594nm	25	25	N/A	1.80%	
Cross	543nm	37	37	N/A	9%	
Cross	594nm	45	45	N/A	4.70%	
11 Lines	594nm	30.3	30.3	2.8	2.50%	
7 Lines	633nm	22	22	3.6	0.70%	
5 Lines	633nm	29	6	1.5	1.10%	
7 Lines	633nm	7	5.1	0.84	0.40%	
5 Lines	633nm	16	16	4	1.10%	
11 Lines (Thin)	594nm	28	28	2.8	1.1%	
25 Lines	594nm	24	24	1.02	1.70%	

Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Zero Order Intensity @ 635nm	Image
65 Lines	633nm	17.6	17.6	0.27	0.50%	
51 by 51 Grid	594nm	21	21	0.41	1.30%	
51 by 51 Dot Array	633nm	22	22	0.44	0.30%	
11 by 11 Dot Array	633nm	28	28	2.8	2.90%	
5 Rings	633nm	29	29	2.8	0.20%	
1:5 Dot Line	650nm	6	N/A	1.5	12%	
1:9 Dot Line	730nm	0.85	N/A	0.11	9%	
1:19 Dot Line	650nm	13.4	N/A	0.75	6%	
View Finder	650nm	15.1	10.1	N/A	1.70%	
Square View Finder	633nm	34	34	N/A	2.60%	
Circle View Finder	633nm	21	21	N/A	0.60%	

Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Zero Order Intensity @ 635nm	Image
Viewfinder (Dot Circle + Cross)	650nm	6.3	6.3	0.64	0.30%	
Square Viewfinder (Dot)	534nm	8.4	8.4	0.31	6%	
Cross	633nm	60	60	N/A	2.20%	
Viewfinder	405nm	7.1	7.1	N/A	19%	
Line	650nm	40	N/A	N/A	8%	
Line	730nm	5	N/A	N/A	15%	
Cross with High Contrast Area	594nm	10.1	10.1	N/A	2.20%	
4 x 4 Grid	650nm	4.68	4.68	1.18		

The below DOE's can be used with the following Laser Diode Modules:  
Lyte-MV, Lyte-MV-Excel and Greenlyte-MV-Excel

Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Image
17 x 17 Dots	633nm	14.5	14.5	0.91	
2 x 2	633nm	11.4	11.4	11.4	
2 x 2	633nm	5.7	5.7	5.7	
21 x 21	633nm	3.2	3.2	0.16	
101 x 101	633nm	5	5	0.05	
1:16 Dot Circle	633nm	22	22	4.4	
1:40 Dot Circle	633nm	32	32	1.3	
1:40 Dot Circle	633nm	16	16	1.3	
1:36 Dot Circle	633nm	4.1	4.1	0.36	
1:10 Dot Circle	633nm	6	6	1.9	

Name	Designed Wavelength	Horizontal Fan Angle @ 635nm	Vertical Fan Angle @ 635nm	Typical Interbeam Angle @ 635nm	Image
1:/16 Double Circle Dots	633nm	28.8	28.8	5.6/5.7	
12 Rings	633nm	11.4	11.4	0.5	
3:5 Dots	633nm	3.4	2.2	1.7/0.5	
25:1 Lines	633nm	11.4	11.4	0.47	
11 x 11 Dot Frame	633nm	45	45	4.5	
Square	633nm	33.4	33.4	N/A	
Cicle	633nm	21	21	N/A	
8 x 8 Grid	633nm	40	40	4.4	
Line	633nm	35	N/A	N/A	
Cross Hair 90°	633nm	90	90	N/A	
Cross Hair 120°	532nm	120	120	N/A	



# Zero Order

The fan angle and interbeam angles will change with wavelength. A lower wavelength value than the wavelength the angle has been specified at will cause the angles to decrease. A higher wavelength value will cause the angles to increase.


The designed wavelength is the value the zero order is at its lowest intensity as a percentage of total power.

# Quality & Warranty

The DOE optics are supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.



**Please Note:** The images of the patterns generated by DOE's are schematic drawings. In a real setup, higher diffraction orders can be visible, and the undiffracted order can appear as a bright spot in the centre. Global Laser reserve the right to change descriptions and specifications without notice.



For more information about any of our  
other products please visit our website  
@ [www.globallasertech.com](http://www.globallasertech.com)

# Notes



For further information about any of our products please contact your local distributor or you can contact Global Laser in the UK. Your Local Distributor Is:

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