

Model Number	VLM-520-00	VLM-520-01 LPT / VLM-520-01 LPA	VLM-520-02 LPT / VLM-520-02 LPA	VLM-520-03 LPT	VLM-520-17 LPT / VLM-520-17 LPA / VLM-520-17 LPB	VLM-520-51 LPT / VLM-520-51 LPA	VLM-520-52 LPT / VLM-520-52 LPA / VLM-520-52 LPB	VLM-520-53 LPT / VLM-520-53 LPA	VLM-520-60 LPO / LPT / VLM-520-61 LPO / LPT (TTL)	VLM-520-62 LPT / LPA / VLM-520-62 LPT / LPA (TTL)	VLM-520-70 LPO / LPT / VLM-520-71 LPO / LPT (TTL)	VLM-520-72 LPT / LPA / VLM-520-72 LPT / LPA (TTL)	VLM-520-73 LPT / VLM-520-73 LPA	VLM-520-91 LPB	VLM-520-92 LPB	VLM-520-96 LPA	CLM-520-01 LPO	CLM-520-02 LPT	CLM-520-11 LPO	CLM-520-12 LPT	CLM-635-01 LPO	CLM-635-02 LPT	CLM-635-11 LPO	CLM-635-12 LPT
Dimensions	Ø10.52 x 17.2 mm	Ø10.4 x 18.4 mm	Ø10.5 x 26 mm	Ø7 x 21 mm	Ø13 x 62 mm	Ø8 x 30 mm	Ø8.5 x 30.5 mm	Ø10.5 x 31 mm	Ø10 x 40 mm	Ø10 x 40 mm	M12 x 68 mm	M12 x 68 mm	Ø7 x 26.1 mm	Ø16 x 25 mm	Ø27.7 x 95.5 mm	Ø16.5 x 72.8 mm	Ø20 x 60 mm	Ø20 x 60 mm	20 x 20 x 60 mm	20 x 20 x 60 mm	Ø20 x 60 mm	Ø20 x 60 mm	20 x 20 x 60 mm	20 x 20 x 60 mm
Operating voltage	6.5~7.5 VDC	7~10 VDC	7~10 VDC	7~10 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	4~6 VDC	4~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC
Laser class		Class II / Class IIIa	Class II / Class IIIa	Class II	Class II / Class IIIa / Class IIIb	Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa	Class I / Class II / Class IIIa	Class I / Class II	Class I / Class II / Class IIIa	Class II / Class IIIa	Class IIIb	Class IIIb	Class I ~ Class IIIa	Class I	Class II	Class I	Class II	Class I	Class II	Class I	Class II
Wavelength	505~530nm	505~530nm	505~530nm	505~530nm	510~530nm	505~530nm	505~530nm	505~530nm	515~530nm	515~530nm	515~530nm	515~530nm	505~530nm	520nm	505~525 nm	510~530nm	515~530nm	515~530nm	515~530nm	515~530nm	630~645nm	630~645nm	630~645nm	630~645nm
Collimating lens	Plastic lens	Plastic lens	Plastic lens	Plastic lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens
Output aperture	5mm	5mm	4mm	3mm	8mm	5mm	5mm	5mm	0.6mm	2mm	0.6mm	2mm	4.3mm	2.5mm	3mm	3mm	3mm	3mm	3mm	3mm	3mm	3mm	3mm	3mm
Beam shape	Ellipse	Ellipse	Ellipse	Ellipse	Circular	Ellipse	Ellipse	Ellipse	Circular	Circular	Circular	Circular	Ellipse	Ellipse	Ellipse	Ellipse	Circular	Circular	Circular	Circular	Circular	Circular	Circular	Circular
Spot size		< 4.5mm at 3M	Adjustment focus	< 4mm at 5M	< 9 mm at 40M < 22 mm at 100M	5±1 mm at 10M	5±1 mm at 10M	5±1 mm at 10M	< 1mm at 0~50cm < 2mm at 50~90cm	Less than Ø3mm at 0~5M	< 1mm at 0~50cm < 2mm at 50~90cm	Less than Ø3mm at 0~5M	< 7mm at 10M	< 15mm at 10M	5±1 cm at 100M	Adjustment focus	< 1.2mm at 1M	< 9mm at 20M	< 1.2mm at 1M	< 9mm at 20M	< 1.2mm at 1M	< 9mm at 20M	< 1.2mm at 1M	< 9mm at 20M
Divergence (Half Angle)	0.5 mRad	0.5 mRad	0.5 mRad	0.6 mRad	< 0.1 mRad	< 0.4 mRad	< 0.4 mRad	< 0.4 mRad	< 0.4 mRad	< 0.4 mRad	< 0.4 mRad	< 0.4 mRad	< 0.6 mRad	< 15mm at 10M	±3°	Adjustable 0.4 mrad~12°	±3°	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters
Beam alignment		Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	±3°	±3°	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters	< 1mm at 30 meters
Operating temp. range	+10°C ~+40°C	+10°C ~+40°C	+10°C ~+40°C	+15°C ~+30°C	-10°C ~+50°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-10°C ~+60°C	-10°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C
Potential of housing	VDD(+)	VDD(+)	VDD(+)	VDD(+)	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	VDD(+)	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated	Insulated
Mean time to failure	10000hrs	10000hrs	10000hrs	5000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs
Application	Fab, without laser driver	General purpose	Focus adjustable	Economic type	Long range application	Industrial application	Industrial application	Industrial application	Industrial alignment	Industrial alignment	Industrial alignment	Industrial alignment	Economic industrial	High power	Long-range targeting	Professional research	Concentricity Laser	Concentricity Laser	Concentricity Laser	Concentricity Laser	Concentricity Laser	Concentricity Laser	Concentricity Laser	Concentricity Laser
Suggestion		1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	1~10 meters / 3~40 feet	10~500 meters / 40~2000 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	0~0.9 meters / 0~3 feet	0~5 meters / 0~16 feet	0~0.9 meters / 0~3 feet	0~5 meters / 0~16 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	10~1000 meters or above	Above 10mm	0~1 meter / 0~3 feet	1~30 meters / 3~100 feet	0~1 meter / 0~3 feet	1~30 meters / 3~100 feet	0~1 meter / 0~3 feet	1~30 meters / 3~100 feet	0~1 meter / 0~3 feet	1~30 meters / 3~100 feet

Model Number	VLM-635-00 VLM-650-00	VLM-635-01 LPT / LPA VLM-650-01 LPT / LPA	VLM-635-01G LPT / LPA VLM-650-01G LPT / LPA	VLM-635-02 LPT / LPA VLM-650-02 LPT / LPA	VLM-635-02G LPT / LPA VLM-650-02G LPT / LPA	VLM-635-03 LPT / LPA VLM-650-03 LPT / LPA	VLM-635-17 LPT / VLM-635-17 LPA / VLM-635-17 LPB	VLM-650-21 LPT / LPA	VLM-650-22 LPT / LPA	VLM-650-25 LPT	VLM-635-31 LPT / LPA	VLM-635-32 LPT / LPA	VLM-635-40 LPO / LPT VLM-635-41 LPO / LPT (TTL)	VLM-635-42 LPO / LPT VLM-635-42 LPO / LPT (TTL)	VLM-635-63 LPO / LPT	VLM-635-70 LPO / LPT VLM-635-71 LPO / LPT (TTL)	VLM-635-72 LPT / LPA VLM-635-72 LPT / LPA (TTL)	VLM-635-91 LPB	VLM-635-96 LPA	VLM-780-01 LPT / LPA VLM-850-01 LPT / LPA	VLM-780-03 LPT / LPA VLM-850-03 LPT / LPA	VLM-780-04 LPT / LPA	VLM-850-01 LPT-15 / LPT-30	VLM-850-02 LPT-15 / LPT-30	
Dimensions	Ø10.52 x 17.2 mm	Ø10.4 x 18.4mm	Ø10.4 x 18.4mm	Ø10.5 x 26 mm	Ø10.5 x 26 mm	Ø7 x 21 mm	Ø13 x 50 mm	Ø4 x 15 mm	Ø4 x 15 mm	Ø7 x 21 mm	Ø8 x 27 mm	Ø8.5 x 30.5 mm	Ø10 x 40 mm	Ø10 x 40 mm	10.6 x 12.2 mm	M12 x 68 mm	M12 x 68 mm	Ø16 x 25 mm	Ø16.5 x 72.8 mm	Ø10.5 x 19 mm	Ø7 x 21 mm	Ø6.55 x 21.1 mm	Ø16 x 17.5 mm	Ø16 x 29 mm	
Operating voltage	2.2~2.7 VDC / 2.15~2.6 VDC	2.6~6 VDC	2.6~6 VDC	2.6~6 VDC	2.6~6 VDC	2.6~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	2.6~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	4~6 VDC	3~6 VDC	2.6~6 VDC	2.6~6 VDC	2.6~6 VDC	4~6 VDC	9~36 VDC	
Laser class		Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa	Class II / Class IIIa / Class IIIb	Class II / Class IIIa	Class II / Class IIIa	Class II	Class II / Class IIIa	Class II / Class IIIa	Class I / Class II	Class I / Class II / Class IIIa	Class I / Class II	Class I / Class II	Class I / Class II / Class IIIa	Class IIIb	Class I ~ Class IIIa	Class I / Class IIIb	Class I / Class IIIb	Class I / Class IIIb	Class I, Eye Safe	Class I, Eye Safe	
Wavelength	630~645nm / 650~660nm	630~645nm / 645~665nm	630~645nm / 645~665nm	630~645nm / 645~665nm	630~645nm / 645~665nm	630~645nm / 645~665nm	630~645nm	645~660nm	645~660nm	630~645nm	630~645nm	630~645nm	630~645nm	630~645nm	630~645 nm	630~665nm	630~665nm	635nm	630~645nm	770~795nm / 840~865nm	770~795nm / 840~865nm	770~795nm	850nm	850nm	
Collimating lens	Plastic lens	Plastic lens	Glass lens	Plastic lens	Glass lens	Plastic lens	Glass lens	Plastic lens	Glass lens	Plastic lens	Glass lens	Glass lens	Glass lens	Glass lens	Plastic lens	Glass lens	Glass lens	Plastic lens	Glass lens	Plastic lens	Plastic lens	Plastic lens	Glass lens	Glass lens	
Output aperture	5mm	5mm	5mm	4mm	4mm	3mm	8mm	2.1mm	2.1mm	3mm	5mm	5mm	0.6mm	2mm	5mm	5mm	2.5mm	5mm	5mm	7mm	5mm	5mm	5mm	5mm	
Beam shape	Ellipse	Ellipse	Ellipse	Ellipse	Ellipse	Ellipse	Circular	Ellipse	Ellipse	Ellipse	Ellipse	Ellipse	Circular	Ellipse	Ellipse	Circular	Ellipse	Ellipse	Ellipse	Adjustment focus	Ellipse	Ellipse	Ellipse	Round	Round
Spot size		5±1mm at 5M	4±1mm at 5M	5±1 mm at 5M Adjustment focus	4±1 mm at 5M Adjustment focus	4±1 mm at 5M	< 9 mm at 40M < 22 mm at 100M	7±1 mm at 5M	10±1 mm at 5M	< 1.1 mm at 18~45cm	5±1 mm at 10M	5±1 mm at 10M	< 1mm at 0~50cm < 2mm at 50~90cm	Less than Ø3mm at 0~5M	Ø0.1~Ø0.5 (1/e²)	< 1mm at 0~50cm < 2mm at 50~90cm	Less than Ø3mm at 0~5M	< 15mm at 10M	Adjustment focus	5±1mm at 5M	6±1mm at 5M	6±1mm at 5M	15": 2.4M at 10M 30": 4M at 10M	15": 2.4M at 10M 30": 4M at 10M	
Divergence (Half Angle)	0.5 mRad	0.5 mRad	0.4 mRad	0.5 mRad	0.4 mRad	0.6 mRad	< 0.1 mRad	2.5 mRad	2.5 mRad	< 0.4mRad	< 0.4mRad	< 0.4mRad	< 0.4 mRad	Less than 3°	Less than 3°	< 0.4 mRad	< 0.4 mRad	Adjustable 0.4 mrad~12°	±3°	0.5 mRad	0.6 mRad	0.6 mRad	15" / 30"	15" / 30"	
Beam alignment		Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	
Operating temp. range	+10°C ~+40°C	+10°C ~+40°C	-20°C ~+50°C	+10°C ~+40°C	-20°C ~+50°C	+15°C ~+30°C	-10°C ~+50°C	+15°C ~+30°C	+15°C ~+30°C	-10°C ~+50°C	+15°C ~+30°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-10°C ~+50°C	-20°C ~+60°C	-20°C ~+60°C	-20°C ~+60°C	-10°C ~+60°C	+10°C ~+40°C	+15°C ~+30°C	+15°C ~+30°C	-10°C ~+50°C	-10°C ~+50°C	
Potential of housing	VDD(+)	VDD(+)	VDD(+)	VDD(+)	VDD(+)	VDD(+)	Insulated	VDD(+)	VDD(+)	Insulated	VDD(+)	VDD(+)	Insulated	Insulated	VDD(+)	Insulated	Insulated	VDD(+)	Insulated	VDD(+)	VDD(+)	VDD(+)	VDD(+)	VDD(+)	
Mean time to failure	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	5000hrs	10000hrs	5000hrs	5000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	5000hrs	5000hrs	5000hrs	10000hrs	10000hrs	
Application	Fab, without laser driver	General purpose	General purpose	Focus adjustable	Focus adjustable	Economic type	Long range application	Small size	Small size	Laser engrave machine pilot laser	Modulation	Modulation	Industrial alignment	Industrial alignment	Micro dot size	Industrial alignment	Industrial alignment	High power	Professional research	General purpose	Economic type	Economic type	IR high power illumination	IR high power illumination	
Suggestion		1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	1~10 meters / 3~40 feet	10~500 meters / 40~2000 feet	1~10 meters / 3~40 feet	1~10 meters / 3~40 feet	18~45 cm / 6"-18"	1~10 meters / 3~40 feet	1~10 meters / 3~40 feet	0~1.2 meters / 0~4 feet	0~5 meters / 0~16 feet	1~25 cm / 1/2"-10"	0~0.9 meters / 0~3 feet	0~5 meters / 0~16 feet	1~30 meters / 3~100 feet	Above 10mm	1~30 meters / 3~100 feet	1~10 meters / 3~40 feet	1~10 meters / 3~40 feet	10~100 meters / 40~300 feet	10~100 meters / 40~300 feet	

Quarton - Laser Module Solution

We provide hundreds of cutting edge laser modules, including both off-the-shelf and custom-made models for all industries.

Our customers:



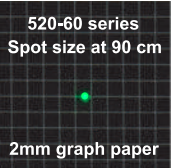
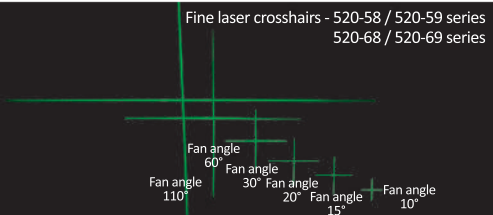
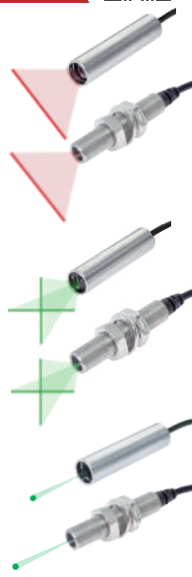
Extremely Fine Laser Line, Crosshairs and Circular dot



At any working distance within 1.2 meters / 4 feet
Ideal for **all industries**. More than 800 models available.
Please refer to the below table to select the suitable model.

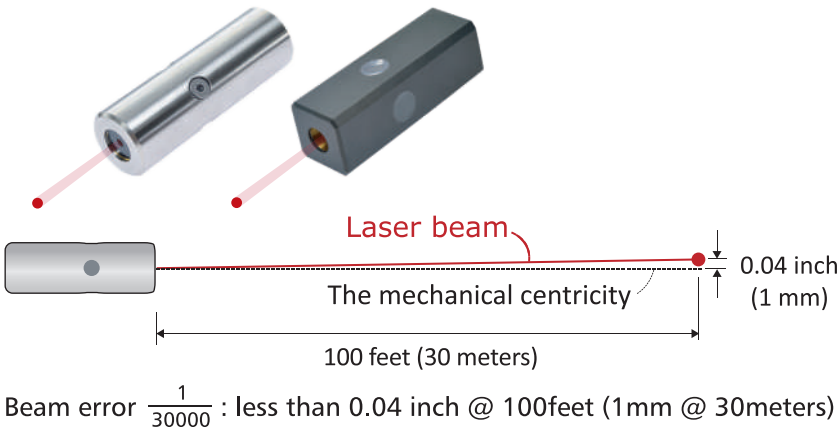
V L M - X X X - X X * L P X - D X X - F X X											
Wavelength		Series		Laser class		Fan angle		Focus length			
520	635	56	57	58	59	O	T	5	10	10	20
520nm	635nm	66	67	68	69	Class I	Class I high power	15°	20°	40	90
		Line	Line	Crosshairs	Crosshairs			15°	20°	40cm	90cm
		TTL	TTL	TTL	TTL						
		60	61	62	62T	O	T	30	45		
		70	71	72	72T	Class I	Class II	30°	45°		
		Short Range Dot	Long Range Dot	Class IIIa	Class IIIa			60	110		
								60°	110°		

* 56 / 57 / 58 / 59 - operation Voltage 3~6V
* 66 / 67 / 68 / 69 - operation Voltage 10~36V



Concentricity Laser Module

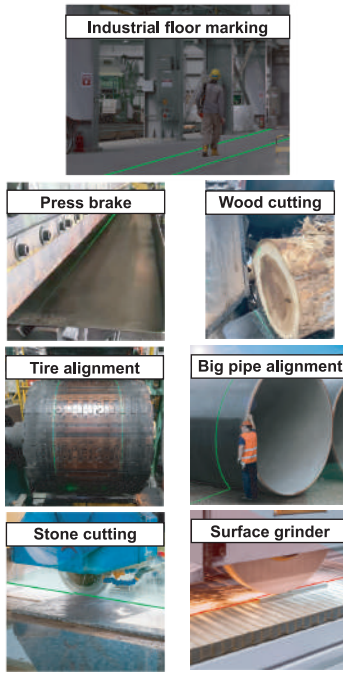
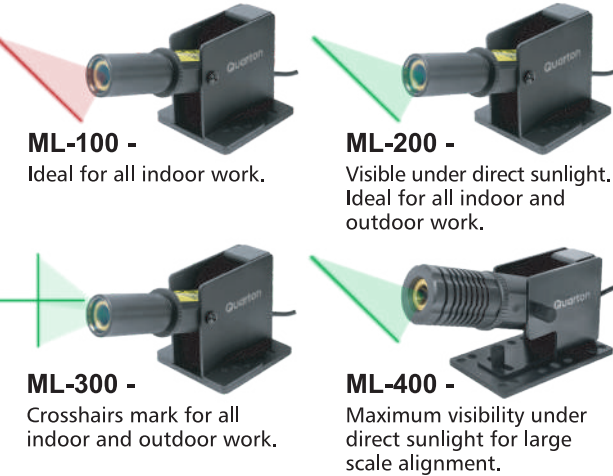
CLM-520-01/02/11/12 Series
CLM-635-01/02/11/12 Series
Ideal for all kinds of precision alignment tasks.



Line Generator



Ideal for large scale cutting or alignment applications.



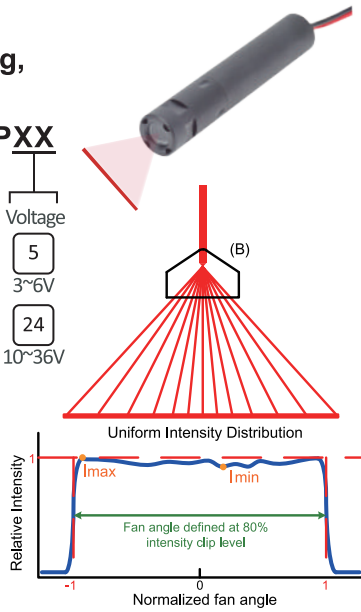
Powell Line Laser

Homogeneous laser line. Ideal for scanning, machine vision and image processing.

VLM-POWELL-XXX-DXX-FXXX-DAXX-OPXX

Wavelength	Fan angle	Focus length	Dimension	Voltage
450	45	30	10	5
450nm	45°	30cm	Ø10	3~6V
520	75	100	M12	24
520nm	75°	100cm	M12 thread	10~36V
650				
650nm				

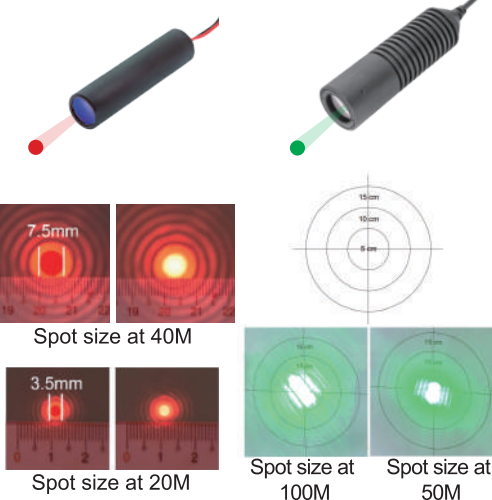
* The fan angle and focus length can be customized.



Ultra-Far Range Round Dot Laser Module



VLM-520-17 Series
VLM-635-17 Series

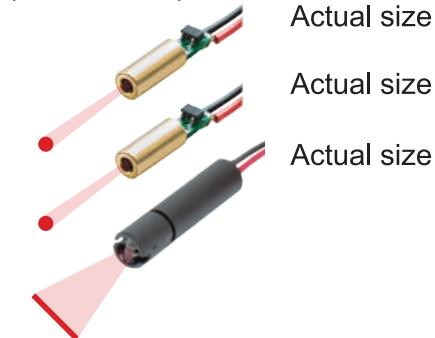


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Smallest Red Laser Module



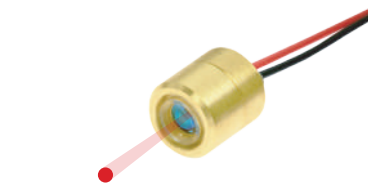
VLM-650-21 Series
VLM-650-22 Series
(Ø4 x 15mm)
VLM-650-23 Series
(Ø5 x 22.8mm)



Micro Dot Size Red Laser Module



VLM-635-63 Series
µ Dot Size Laser Module
20 µ x 40 µ Laser Dot Size



DOT SIZE TABLE				
SPOT SIZE F(Distance (mm))	FWHM (at 25°C)		1/e ² Width (at 25°C)	
	X	Y	X	Y
50 mm	<0.04mm	<0.02mm	<0.05mm	<0.04mm
100 mm	<0.03mm	<0.03mm	<0.09mm	<0.09mm
200 mm	<0.13mm	<0.05mm	<0.2mm	<0.09mm

Laser Mount



QLM-1125
(Diameter 6mm to 12.5mm)
QLM-1165
(Diameter 12.5mm to 16.5mm)
QLM-1225
(Diameter 16.5mm to 22.5mm)

- ▶ 4 direction adjustable.
- ▶ Compatible with laser module/ laser pointer/ flashlight with OD
- ▶ 6mm to 22.5mm. Can be mounted onto optical table.



Accessories

