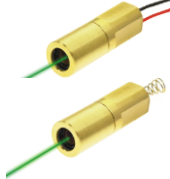
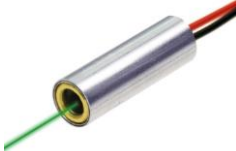


Green Dot Laser Module

Model Number	VLM-520-00	VLM-520-01 series	VLM-520-02 series	VLM-520-17 series	VLM-532-43 series	VLM-520-51 series
Specifications						
						
Dimensions	Ø10.52 x 17.2 mm	Ø10.5 x 19 mm	Ø10.5 x 26 mm	Ø13 x 62 mm	Ø13 x 60 mm	Ø8 x 30 mm
Operating voltage	6.5~7.5 VDC	7~10 VDC	7~10 VDC	3~6 VDC	2.7~3.3 VDC	3~6 VDC
Operating current	Less than 105mA	Less than 80mA / 100mA	Less than 80mA / 100mA	Less than 100mA / 150mA	Less than 300mA	Less than 150mA
Laser power output	Optical power less than 10mW	Less than 0.39 / 1mW / 4mW	Less than 1mW / 4mW	0.7~0.9mW / 2~3mW / 5~6mW	Less than 1mW / 5mW / 10mW	Less than 1mW / 4mW
Laser class		Class 1 / Class 2 / Class 3R	Class 2 / Class 3R	Class 2 / Class 3R / Class 3B	Class 2 / Class 3R / Class 3B	Class 2 / Class 3R
Wavelength	505~530nm	505~530nm	505~530nm	510~530nm	532nm	505~530nm
Collimating lens	Plastic lens	Plastic lens	Plastic lens	Glass lens	Glass lens	Glass lens
Output aperture	5mm	5mm	4mm	8mm		5mm
Beam shape	Ellipse	Ellipse	Ellipse	Circular	Circular	Ellipse
Spot size		Less than 4.5mm at 3M	Adjustment focus	Less than 9 mm at 40M Less than 22 mm at 100M	4 ±1mm at 5M 18 ±2mm at 30M	5±1 mm at 10M
Divergence (Full Angle)	0.5 mRad	0.5 mRad	0.5 mRad	Less than 0.1 mRad	0.3 mRad	Less than 0.4 mRad
Beam alignment		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	+10°C ~+40°C	-10°C ~+50°C	+15°C ~+35°C	-20°C ~+60°C
Storage temp. range	-20°C ~+65°C	-20°C ~+65°C	-20°C ~+65°C	-20°C ~+80°C	-40°C ~+70°C	-20°C ~+85°C
Housing material	Brass	Brass	Brass	Aluminum	Brass	Aluminum
Potential of housing	VDD(+)	VDD(+)	VDD(+)	Insulated	VDD(+)	Insulated
Electrostatic discharge (ESD)		30KV	30KV	30KV	30KV	30KV
Moisture sensitivity level (MSL)		Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.
Wire type	3*PIN from LD	1007-26AWG	1007-26AWG / Spring	1007-26AWG	1007-26AWG / Spring	1007-26AWG
Cable length		115±15mm	115±15mm / 6.5±1mm	115±15mm	115±15mm / 6±1mm	115±15mm
Mean time to failure (MTTF) 25°C	10000hrs	10000hrs	10000hrs	10000hrs	3000hrs	10000hrs
Application	Lab, without laser driver	General purpose	Focus adjustable	Long range application	DPPS laser	Industrial application
Suggestion work distance		1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	10~500 meters / 40~2000 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet

VLM-520-52 series	VLM-520-53 series	VLM-520-60 series	VLM-520-61 series (TTL)	VLM-520-62 series	VLM-520-62T series (TTL)	VLM-520-70 series
						
Ø8.5 x 30.5 mm	Ø10.5 x 31 mm	Ø10 x 40 mm	Ø10 x 40 mm	Ø10 x 40 mm	Ø10 x 40 mm	M12 x 68 mm
3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC	10~36 VDC
Less than 150mA / 280mA	Less than 150mA	Less than 60mA / 150mA	Less than 60mA / 150mA	Less than 80mA / 100mA / 150mA	Less than 80mA / 100mA / 150mA	Less than 20mA at 24V
Less than 1mW / 4mW / 15mW	Less than 1mW / 4mW	Less than 0.39mW / 1mW	Less than 0.39mW / 1mW	0.2±0.1mW / 0.8±0.1mW / 3.5±0.5mW	0.2±0.1mW / 0.8±0.1mW / 3.5±0.5mW	Less than 0.39mW / 1mW
Class 2 / Class 3R / Class 3B	Class 2 / Class 3R	Class 1 / Class 2	Class 1 / Class 2	Class 1 / Class 2 / Class 3R	Class 1 / Class 2 / Class 3R	Class 1 / Class 2
505~530nm	505~530nm	515~530nm	515~530nm	515~530nm	515~530nm	515~530nm
Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens
5mm	5mm	0.6mm	0.6mm	2mm	2mm	0.6mm
Ellipse	Ellipse	Circular	Circular	Circular	Circular	Circular
5±1 mm at 10M	5±1 mm at 10M	Less than 1mm at 0~50cm Less than 2mm at 50~90cm	Less than 1mm at 0~50cm Less than 2mm at 50~90cm	Less than Ø3mm at 0~5M	Less than Ø3mm at 0~5M	Less than 1mm at 0~50cm Less than 2mm at 50~90cm
Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad
Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°
-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 ~+85°C	-20°C ~+85°C	-20°C ~+85°C	-20°C ~+85°C	-20°C ~+85°C	-20°C ~+85°C	-20°C ~+85°C
Stainless steel	Bronze	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Insulated	VDD(+)	Insulated	Insulated	Insulated	Insulated	Insulated
30KV	30KV	30KV / Arc protection	30KV / Arc protection	30KV / Arc protection	30KV / Arc protection	30KV / Arc protection
Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.
1007-26AWG	1007-26AWG / Spring	2464 2-WIRE CABLE 26 AWG	2464 3-WIRE CABLE 26 AWG	2464 2-WIRE CABLE 26 AWG	2464 3-WIRE CABLE 26 AWG	2464 2-WIRE CABLE 26 AWG
115±15mm	115±10mm / 6.5±1mm	330±30mm	330±30mm	330±30mm	330±30mm	330±30mm
10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs
Industrial application	Industrial application	Industrial alignment	Industrial alignment with TTL modulation function	Industrial alignment	Industrial alignment with TTL modulation function	Industrial alignment
1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	0~1 meters / 0~3 feet	0~1 meters / 0~3 feet	0~5 meters / 0~16 feet	0~5 meters / 0~16 feet	0~1 meters / 0~3 feet

VLM-520-71 series (TTL)	VLM-520-72 series	VLM-520-72T series (TTL)	VLM-520-73 series	VLM-520-74 series	CLM-520-01 LPO	CLM-520-02 LPT
						
M12 x 68 mm	M12 x 68 mm	M12 x 68 mm	Ø7 x 26.1 mm	Ø6.5 x 26 mm	Ø20 x 60 mm	Ø20 x 60 mm
10~36 VDC	10~36 VDC	10~36 VDC	3~6 VDC	3~6 VDC	3~6 VDC	3~6 VDC
Less than 20mA at 24V	Less than 30mA at 24V	Less than 30mA at 24V	Less than 150mA / 200mA	Less than 150mA / 200mA	Less than 160mA	Less than 160mA
Less than 0.39mW / 1mW	0.2±0.1mW / 0.8±0.1mW / 3.5±0.5mW	0.2±0.1mW / 0.8±0.1mW / 3.5±0.5mW	Less than 1mW / 4mW	Less than 1mW / 4mW	Less than 0.39mW	Less than 1mW
Class 1 / Class 2	Class 1 / Class 2 / Class 3R	Class 1 / Class 2 / Class 3R	Class 2 / Class 3R	Class 2 / Class 3R	Class 1	Class 2
515~530nm	515~530nm	515~530nm	505~530nm	505~530nm	515~530nm	515~530nm
Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens	Glass lens
0.6mm	2mm	2mm	4.3mm	4.3mm	0.8mm	3mm
Circular	Circular	Circular	Ellipse	Ellipse	Circular	Circular
Less than 1mm at 0~50cm Less than 2mm at 50~90cm	Less than Ø3mm at 0~5M	Less than Ø3mm at 0~5M	Less than 7mm at 10M	Less than 7mm at 10M	Less than 1.2mm at 1M	Less than 9mm at 20M
Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.4 mRad	Less than 0.6 mRad	Less than 0.6 mRad	0.15 mRad	0.15 mRad
Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 3°	Less than 1mm	Less than 1mm
-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 ~+85°C	-20°C ~+85°C	-20°C ~+85°C	-40°C ~+85°C	-40°C ~+85°C	-40°C ~+85°C	-40°C ~+85°C
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Bronze	Stainless steel	Stainless steel
Insulated	Insulated	Insulated	VDD(+)	VDD(+)	Insulated	Insulated
30KV / Arc protection	30KV / Arc protection	30KV / Arc protection	30KV	30KV	30KV	30KV
Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.
2464 3-WIRE CABLE 26 AWG	2464 2-WIRE CABLE 26 AWG	2464 3-WIRE CABLE 26 AWG	1007-26AWG	1007-26AWG	Micro USB (5V)	Micro USB (5V)
330±30mm	330±30mm	330±30mm	115±15mm	115±15mm		
10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs	10000hrs
Industrial alignment with TTL modulation function	Industrial alignment	Industrial alignment with TTL modulation function	Economic industrial application	Economic industrial application	Concentricity Laser	Concentricity Laser
0~1 meters / 0~3 feet	0~5 meters / 0~16 feet	0~5 meters / 0~16 feet	1~30 meters / 3~100 feet	1~30 meters / 3~100 feet	0~1 meter / 0~3 feet	1~30 meters / 3~100 feet

CLM-520-11 LPO	CLM-520-12 LPT
	
20 x 20 x 60 mm	20 x 20 x 60 mm
3~6 VDC	3~6 VDC
Less than 160mA	Less than 160mA
Less than 0.39mW	Less than 1mW
Class 1	Class 2
515~530nm	515~530nm
Glass lens	Glass lens
0.8mm	3mm
Circular	Circular
Less than 1.2mm at 1M	Less than 9mm at 20M
0.15 mRad	0.15 mRad
Less than 1mm	Less than 1mm
-20°C ~+60°C	-20°C ~+60°C
-40°C ~+85°C	-40°C ~+85°C
Hard anodized aluminum	Hard anodized aluminum
Insulated	Insulated
30KV	30KV
Level 1 - acc to JEDEC J-STD-020E.	Level 1 - acc to JEDEC J-STD-020E.
Micro USB (5V)	Micro USB (5V)
10000hrs	10000hrs
Concentricity Laser	Concentricity Laser
0~1 meter / 0~3 feet	1~30 meters / 3~100 feet