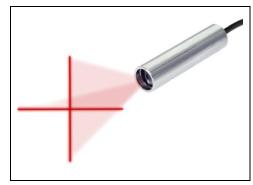
### Red Crosshair Laser Module with TTL Function Fan Angle 60° Uniform Line

### **VLM-635-59-60°Series**



The newly developed crosshairs lens come with various fan angles and they produce high quality uniform crosshairs laser lines in a robust stainless housing. These crosshairs laser modules provide target aid in alignment and position task. Ideal for machine vision, patient alignment, CNC milling, chassis alignment, quality control, textile industry and printing industry. They are all come with TTL function to allow up to 10K Hz modulation frequency. They are available at 10cm, 20cm, 40cm and 90 cm focus length, red & green wavelength and Class 1M and Class 2M laser class to cover within 1 meter range marking task. For customized focus length, wavelength and laser power output, please contact us.

#### **FEATURES:**

- Built with high precision glass crosshair lens and glass laser collimating lens.
- Fan Angle : 60°
- Focus range: 10cm, 20cm, 40cm, 90cm, customized focus length are available by request.
- CW to 10K HZ stable power output for demanding power and speed are of important.
- Customized focus within 1 meter available please direct contact us.
- Two laser power output level: LPO Class 1M laser product

LPT - Class 2M laser product

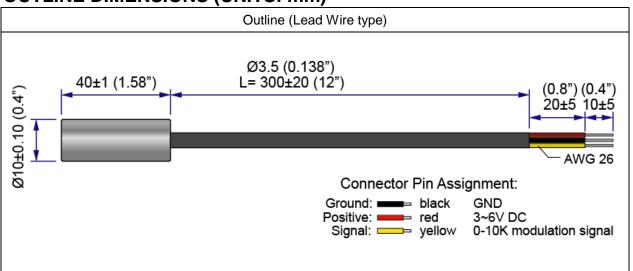
- Dimensions: Ø10 x 40 mm (Ø0.39" x 1.575")
- Wavelength: 630~645 nm
- 3~6 VDC operation.
- Connection type : Lead wire
- Laser crosshairs demonstration : <a href="https://www.youtube.com/watch?v=eSyVa9-9kYM">https://www.youtube.com/watch?v=eSyVa9-9kYM</a>

#### APPLICATIONS: ideal for

- Machine vision.
- Patient alignment.
- CNC milling.
- Chassis alignment.
- Quality control.
- Textile industry.
- Printing industry.

## **VLM-635-59-60°Series**

## **OUTLINE DIMENSIONS (UNITS: mm)**



### **SPECIFICATIONS**

	Part Number	VLM-635-59 LPO-D60-			VLM-635-59 LPT-D60-				
	Fait Number	F10	F20	F40	F90	F10	F20	F40	F90
1	Focus length	10 cm	20 cm	40 cm	90 cm	10 cm	20 cm	40 cm	90 cm
2	Fan angle / Laser line length		60° / L	.ength	of Lase	er Line	as <b>TA</b> l	BLE A	
3	Laser line width				AS <b>TA</b>	BLE B			
4	Recommended working range				AS <b>TA</b>	BLE B	ı		
5	TTL modulation frequency	High ON, 0-10K Hz							
6	Dimensions / Weight	Ø10 x 40 mm (Ø0.39" x 1.575")							
7	Weight				17:	±1g			
8	Operating voltage (Vop)				3~6	VDC			
9	Operating current (lop)	L	ess tha	ın 50m	Α	Le	ess tha	n 100m	nΑ
10	Optical power*	L	ess tha	an 5mV	٧	L	ess tha	n 10m\	W
11	Laser power output**	Le	ss than	0.39n	ηW	L	ess tha	an 1mV	V
12	Laser class		Clas	s 1M			Clas	s 2M	
13	Wavelength (λp)	Vavelength (λp) 630~645nm							
14	Collimating lens / Line generating lens  Aspherical glass lens								
15	Output aperture				8n	nm			
16	Beam shape				Cross	shairs			
17	Laser line accuracy			4	0"(±1m	m@5N	Л)		
18	Operating temp. range***				-20°C -	~+60°C	)		
19	Storage temp. range	-20°C ~+85°C							
20	Housing material	Stainless steel							

### **VLM-635-59-60°Series**

21	Potential of housing	Insulated					
22	Electrostatic discharge (ESD)	30KV					
23	Moisture sensitivity level (MSL)	Level 1 - acc to JEDEC J-STD-020E.					
24	Wire type	2464 3-WIRE CABLE 26 AWG					
25	Cable length	330±30mm					
26	Mean time to failure (MTTF) 25°C	Above 10000 hrs					
27	International Protection Marking	IP67					
20	Application	Precision fine crosshairs for Machine vision, CNC and					
20	Application	Medical with modulation function					
29	Suggestion work distance 0~1.2 meters / 0~4 feet						

<sup>\*</sup> Optical power is total power output measured at the aperture of the laser.

#### SAFETY LABEL

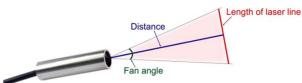
LPO:

LPT:

CAUTION
LASER RADIATION
DO NOT STARE
INTO BEAM
LASER PRODUCT
Manufacturer: QUARTON inc
97, 185, sec., 1 1-1 ung Rd.
Haichh Dairdt, Hear Tagac Clay.

## **TABLE A: Laser Line Length Table:**

**CLASS I LASER PRODUCT** 



#### Length of laser line:

Distance	10 cm	20 cm	40 cm	100 cm
Fan angle	(4 inch)	(8 inch)	(16 inch)	(40 inch)
10°	1.75cm	3.5 cm	7 cm	17.5 cm
	(0.6")	(1.4")	(2.8")	(6")
15°	2.6 cm	5.2 cm	10.5 cm	26.3 cm
	(1")	(2")	(4")	(10")
20°	3.5 cm	7 cm	14 cm	35 cm
	(1.4")	(2.8")	(5.6")	(14")
30°	5.3 cm	10.7 cm	21 cm	53.5 cm
	(2")	(4")	(8")	(20")
60°	11.5 cm	23 cm	46 cm	115.5 cm
	(4½")	(9")	(18")	(45")
110°	28.6 cm	57.1 cm	114.2 cm	285.6 cm
	(11¼")	(23")	(46")	(112½")

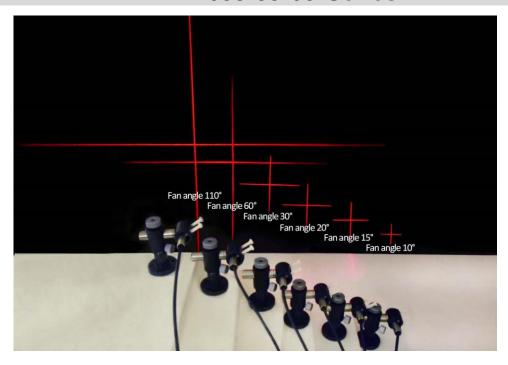
Headquarter

Tel: 886-2-2648-5656 Fax: 886-2-2648-5522 contact@quarton.com www.quarton.com

<sup>\*\*</sup> According to FDA 1040.10 & IEC 60825-1 regulations, laser power output is measured by 7mm aperture stop from a 10 cm distance of the laser.

<sup>\*\*\*</sup> Operation temperature means within this temperature range, the laser spot/line will not be affected to change the spot size/line width. It can still work over this range, but the laser spot size or laser line width will be larger.

## **VLM-635-59-60°Series**



## **TABLE B: Recommended working range:**

#### Focus at 10 cm:

Working range: 0 - 19cm(0-7.5")

Best at: 5.5 - 15cm(2.2"- 6")

Laser Line Width <1mm
Laser Line Width <2mm

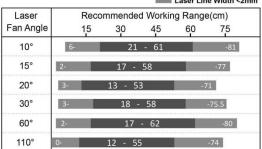
Laser		Recon	nmende	d Work	ing Ran	ge(cm)
Fan Angle		5	10	15	20	25
10°		5-	9 -	15 -	19	
15°	0-	-	4 - 15		-21.5	
20°	0-		6 -	17	-21	
30°	0-	4	4 - 15		-21	
60°	0-		5.5 - 1	.5 -	19	
110°	0-		4 - 16.	5		-25

#### Focus at 40 cm:

Working range: 2 - 80cm(0.8"- 31.5")

Best at: 17 - 62cm(6.7"- 24.4")

Laser Line Width <1mm
Laser Line Width <2mm



#### Focus at 20 cm:

Working range: 0 - 33.5cm(0- 13.2")

Best at: 11 - 26cm(4.3"- 10.2")

Laser Line Width <1mm
Laser Line Width <2mm

Laser	Recommended Working Range(cm)								
Fan Angle		10	20	30	40	50			
10°	5-	8 -	24	-33					
15°	5-	1	4 - 24	-33					
20°	5-	9 -	- 23	-33					
30°	0-	1	2 - 25	-32					
60°	0-	13	1 - 26	-33.5					
110°	6	5.5- 12	- 22 -	28					

#### Focus at 90 cm:

Working range: 22.5 - 120cm(9"- 47.2")

Best at: 61 - 98cm(24"- 38.6")

Laser Line Width <1mm
Laser Line Width <2mm

 Laser Fan Angle
 Recommended Working Range(cm)

 40
 60
 80
 100
 120

 10°
 36 55 - 119
 -125

 15°
 34 63 - 94
 -124

 20°
 32 55 - 92
 -120

 30°
 25 66 - 108
 -126.5

 60°
 22.5 61 - 98
 -120

 110°
 26 55 - 104
 -130

Laser Line Width <1mm Laser Line Width <2mm

Headquarter

QUARTON INC.

Tel: 886-2-2648-5656 Fax: 886-2-2648-5522 contact@quarton.com www.quarton.com USA

QUARTON USA INC.

Cell: 210-837-3485 contact@quarton.com www.quarton.com

## **Optional Accessories**

**Quarton** offers mounts, power supply boards, battery pack and USB cable switch to help you running as quickly as possible. For more information, please visit <a href="https://www.quarton.com">www.quarton.com</a>, <a href="https://www.guarton.com">www.guarton.com</a>, <a href="https://www.guarton.com">www.guarton.com</a>, <a href="https://www.guarton.com">www.guarton.com</a>, <a href="https://

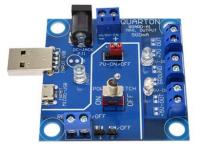
**QLM-1125** - Laser Module Mount/Holder for diameter 6mm to 12.5mm, it's an ideal choose for mounted onto optical tables.

#### Feature:

- 4 directions adjustable.
- Can be mounted onto the optical table with screws (Screws not included).
- Engraved scale for precision adjustable.



**LMPS-MP1** - Multi-function Laser Module Power Supply Board. Four input: USB, micro USB, DC Power Jack(5.5 x 2.1), and terminal block. Two channel output: 7 VDC 500mA and 5 VDC 1A. Three switches-toggle switch, remote switch and TTL signal.



#### Feature:

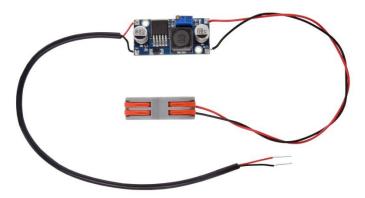
- Allow four kinds of power input: USB, micro USB, DC Power Jack(5.5x2.1) and terminal block.
- Two Channel output: 7 VDC 500mA and 5 VDC 1A.
- Built-in three switches: toggle switch, terminal block remote switch and TTL signal switch by on-board connect point.
- 7 VDC output work for all Quarton Laser Modules with 7-12 V operation Voltage (Vop).
- 5 VDC output work for all Quarton Laser Modules with 3-6 V operation Voltage (Vop).
- Three LED indicators: Input power indicator, 7V output indicator and 5V output indicator.

www.guarton.com

contact@quarton.com

USA

## **Optional Accessories**



**LMPS-MP2** - DC converter, In: 9-36V, Out: 5V 1A.



LMPS-mUSB1 - Laser Module Power Supply Board, Input: micro USB, Output: 5 VDC 500mA.

#### Feature:

- Micro USB connector power input.
- Output 5 VDC 500mA with alligator clips.
- For all Quarton Laser Modules that require 3-6V operation Voltage.



**LMPS-DC1** - Laser Module Power Supply Board, Input: DC Power Jack(5.5 x 2.1), Output: 5 VDC 500mA.

#### Feature:

- DC Power Jack(5.5 x 2.1) power input.
- Output 5 VDC 500mA with alligator clips.
- For all Quarton Laser Modules that require 3-6V operation voltage.

## **Optional Accessories**



### **CLM-BP4N3** - Battery pack (4\* AA batteries)

\*\*\* AA Batteries are **NOT** included in package.

#### Feature:

USB Output Voltage: 5 VDC.

Color: Black.



### **CLM-USBSW** - USB Cable Switch.

#### Feature:

Length: 28cm.

Color: Black.



### **CLM-UM3M** - USB to micro USB Cable.

#### Feature:

Length: 3 meters.

Color: Black.