

# Smart Variable Laser Treatment Module

## CHR40-10



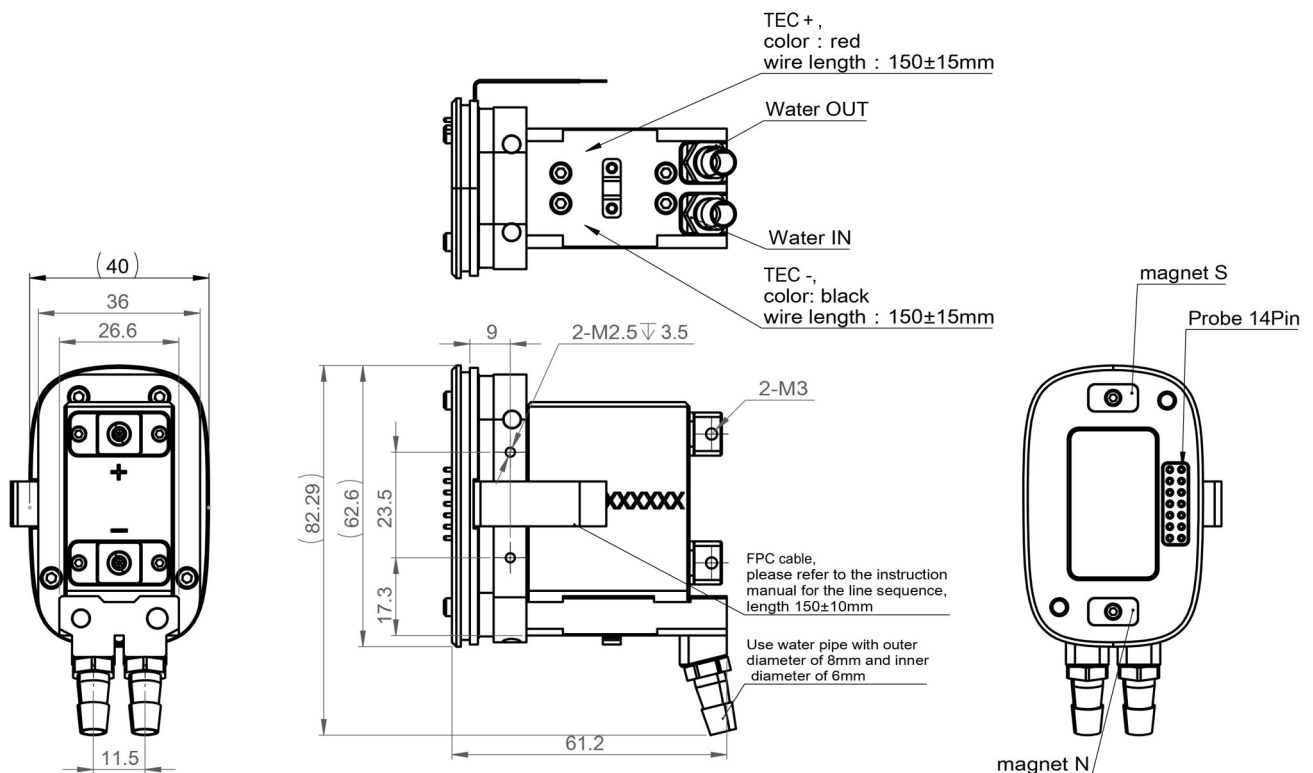
### Features

- Changeable Spot Size
- Integration Design
- High reliability
- Contact detection
- Skin-color detection

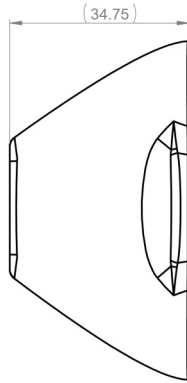
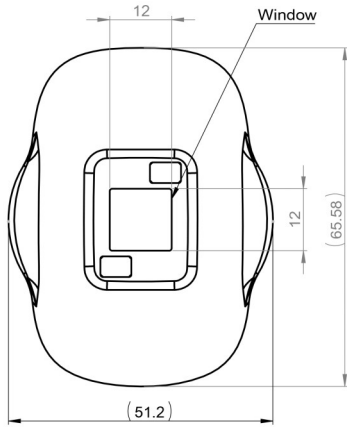
### Applications

- Hair Removal

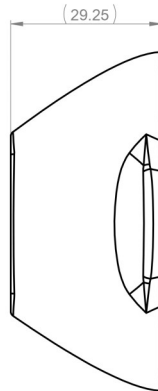
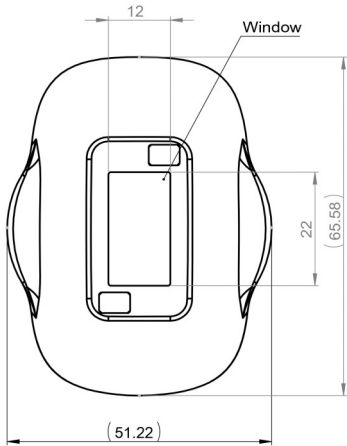
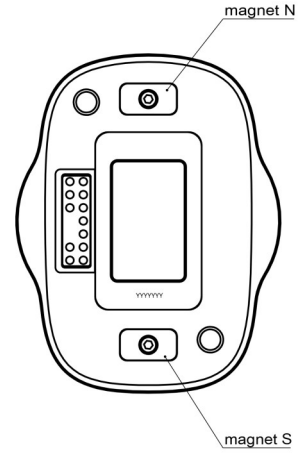
### Product Dimensions (mm)



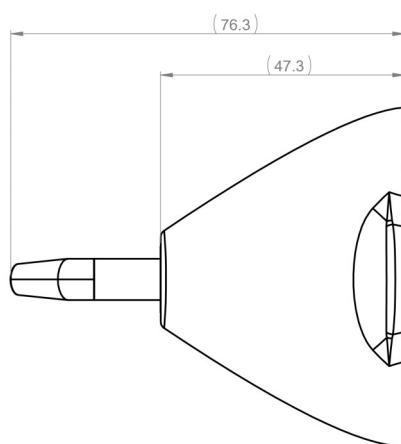
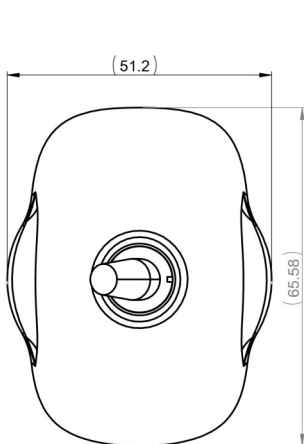
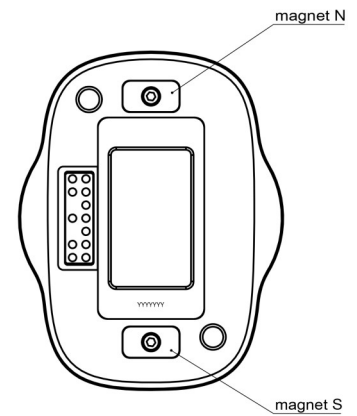
**Product Dimensions (mm)**



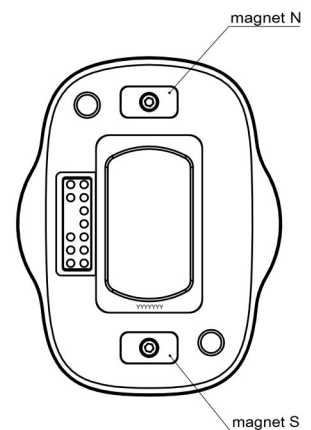
**10X10**



**10X20**



**φ6**



## Product Specifications

### Product Code

Part No. <sup>1</sup>

(Typical Configuration)

FL-CHR40-10-S-2000-808-QCW

Optical Parameters <sup>2</sup>	Unit	Value
Centroid Wavelength	nm	808
Wavelength Tolerance	nm	± 15
Number of Bars	#	10
Spot Size	mm	10*10 / 10*20 / Ø6
Output Power of LD	W	2000
Output Power of Module	W	1700 (10*10mm); 1800 (10*20mm); 1400 (Ø 6mm)
Pulse width	ms	20
Frequency	Hz	10
Duty Cycle	%	20

### Cooling Parameters

TEC I <sub>max</sub>	A	~7
TEC V <sub>max</sub>	V	~12

### Electrical Parameters <sup>3</sup>

Max. Operation Current I <sub>op</sub>	A	≤ 178
Threshold Current I <sub>th</sub>	A	≤ 20
Operating Voltage V <sub>op</sub>	V	≤ 20
Operation Condition <sup>4</sup>	-	Following Energy Table

### Thermal parameters

Operating Temperature	°C	22 ~ 28
Coolant <sup>5</sup>	-	Purified water with ion exchange resin filter (Replace every 3 months)
Flow Rate	L/min	3-3.6
Water pressure	MPa	~0.35
Storage Temperature <sup>6</sup>	°C	0~55

<sup>1</sup>Part No. = Brand Code - Series - Bar No. - Additional Function - Platform Power Limit - Centroid Wavelength - Operation Mode

<sup>2</sup>Data at 25°C unless otherwise stated.

<sup>3</sup>Reduced lifetime if used above nominal operating conditions.

<sup>4</sup>The module should be operated following the energy table.

<sup>5</sup>The cooling system should use materials which can bear cooling water corrosion, like stainless still or plastic.

<sup>6</sup>A non-condensing environment is required for storage and operation below ambient dew level.



**Energy Table**

CHR40-10-S Energy Table (85% Transmittance)-10X10														
Energy(J)		Frequency(Hz)										Iop		
		1	2	3	4	5	6	7	8	9	10		~173A	
Pulse Width (ms)	10	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0		~150A
	20	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0		~140A
	30	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1		~125A
	40	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0	51.0		Water Temperature T=25±3°C Flow Rate: 3~3.6L/min
	50	63.8	63.8	63.8	63.8	63.8	63.8	63.8	63.8					
	60	76.5	76.5	76.5	76.5	76.5	76.5							
	70	77.4	77.4	77.4	77.4	77.4								
	80	88.4	88.4	88.4	88.4									
	90	99.5	99.5	99.5										
	100	110.5	110.5											
	200	221.0												

CHR40-10-S Energy Table (90% Transmittance)-10X20														
Energy(J)		Frequency(Hz)										Iop		
		1	2	3	4	5	6	7	8	9	10		~173A	
Pulse Width (ms)	10	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		~150A
	20	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0		~140A
	30	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6	44.6		~125A
	40	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0		Water Temperature T=25±3°C Flow Rate: 3~3.6L/min
	50	67.5	67.5	67.5	67.5	67.5	67.5	67.5						
	60	81.0	81.0	81.0	81.0	81.0	81.0							
	70	81.9	81.9	81.9	81.9	81.9								
	80	93.6	93.6	93.6	93.6									
	90	105.3	105.3	105.3										
	100	117.0	117.0											
	200	234.0												

CHR40-10-S Energy Table (70% Transmittance)-φ6														
Energy(J)		Frequency(Hz)										Iop		
		1	2	3	4	5	6	7	8	9	10		~173A	
Pulse Width (ms)	10	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0		~150A
	20	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0		~140A
	30	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7		~125A
	40	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0		Water Temperature T=25±3°C Flow Rate: 3~3.6L/min
	50	52.5	52.5	52.5	52.5	52.5	52.5	52.5						
	60	63.0	63.0	63.0	63.0	63.0	63.0	63.0						
	70	63.7	63.7	63.7	63.7	63.7								
	80	72.8	72.8	72.8	72.8									
	90	81.9	81.9	81.9										
	100	91.0	91.0											
	200	182.0												