

◎TTG50TEC 시리즈

『Picture or 3D』



『Features』

- ◆ Optical output power : Max. ~ 3W
- ◆ TEC cooler를 적용, output power stability < $\pm 1\%$
- ◆ 포커싱 가능 형태
- ◆ 다양한 빔형태 : Dot, Line, Cross, Circle, Multi-line, Multi-grid etc
- ◆ 라인빔의 일직선성 : error < $\pm 0.2\text{mm}$ at 3m
- ◆ Options
 - Glass collimate lens : 요구되는 빔 사양에 따라 차등 적용
 - TTL modulation < 1 MHz

『Optical / Electrical features』

- *1. **Gaussian/Non-gaussian line** : Cylindrical or Powell lens를 이용한 연속선을 나타내며, Gaussian은 5, 10, 15, 30, 45, 60, 90, 120 Deg. Non-Gaussian은 30, 45, 60 Deg. Fan angle.
- *2. **Diffractive Line/Cross** : Line 20, 30, 40, 50, 90, 120 Deg. 와 Cross 50 Deg. Fan angle. 측정거리는 500mm 거리. (1m 이내에서 사용 추천)
- *3. **DOE pattern** : Cross 15 Deg., Circle, Multi-line, Multi-grid etc. 측정거리는 500mm 거리.(3m 이내에서 사용 추천)

Items		Features			
Wavelength		405 nm	445/450nm	520nm	532nm
Output Power		~10, ~35, ~100mW	~70mW, Multi ~1, ~1.2W	~4, ~18, ~80mW	~5 ~10 ~50 ~100 ~200 ~500mW
Output Power stability		< $\pm 1\%$	< $\pm 1\%$, Multi < $\pm 5\%$	< $\pm 1\%$	< $\pm 5\%$
Beam type & size(thickness) at 3m ■ Optional	Dot (Divergence)	$\varnothing 1, \varnothing 2, 3 \times 2$ (< 0.1 mrad)	$\varnothing 1, \varnothing 2$ (< 0.1mrad) Multi $2 \times 1, 5 \times 2$ (< 2 mrad)	$\varnothing 1, \varnothing 2, 2 \times 1$ (< 0.1 mrad)	$\varnothing 1.5$ (< 0.1 mrad)
	*1 Gaussian/Non-gaussian line	> 1 mm	> 1 mm, > 2 mm	> 0.4 mm	> 2 mm
	*2 Diffractive Line/Cross	> 0.5 mm	> 0.5 mm, > 3 mm	> 1 mm	> 1 mm
	*3 DOE pattern	> 0.5 mm	> 0.5mm, > 3 mm	> 1 mm	> 1 mm
Focused beam size[mm] at 300mm		Dot >0.05, thickness >0.02	Dot >0.05, thickness >0.02 Multi Dot >0.3, thickness >0.07	Dot >0.05, thickness >0.02	Dot >0.1, thickness >0.1
Mode		TEM00	TEM00, Multi-mode	TEM00	TEM00
Input voltage		5 ~ 12 V			
Consumption current		Max. 1.2 A	Max. 2.5 A	Max. 1.2 A	Max. 2.5 A
Laser Diode type		P or N-type or other			
Dimension		67 × 167 × 55 mm			
Outside Material		Aluminum anodizing			
Lifetime at room temp.		20,000 hours			10,000 hours
Operating Temperature		-10 ~ 40 °C			
Storage Temperature		-30 ~ 80 °C			
Options		빔 사양, TTL Modulation < 1 MHz			
Remarks		*설치시에 방열구조 필요 *과도한 충격을 금해주시고, 강한 모터나 전자기파 주변에 설치하는 것을 피해주시요.			

『Optical / Electrical features』

Items		Features			
Wavelength		635nm	660nm	670nm	685nm
Output Power		~10, ~35, ~100, Multi ~300mW	~25 ~45 ~80 ~130 ~180 ~300mW	~18mW	~7, ~25 ~45mW
Output Power stability		< ± 1%, < ± 5%	< ± 1%	< ± 1%	< ± 1%
Beam type & size(thickness) at 3m ■ Optional	Dot (Divergence)	∅2 (<0.1mrad) Multi 2×1, 5×2 (< 2 mrad)	∅2, ∅3 (< 0.1 mrad)	∅1, ∅2, 2×1 (< 0.1 mrad)	∅1.5, ∅2 (< 0.1 mrad)
	*1 Gaussian/Non-gaussian line	> 1 mm, Multi > 2 mm	> 1.5 mm	> 1.5 mm	> 1.5 mm
	*2 Diffractive Line/Cross	> 0.5 mm, Multi > 3 mm	> 0.5 mm	> 0.5 mm	> 0.5 mm
	*3 DCE pattern	> 0.5 mm, Multi > 3 mm	> 0.5 mm	> 0.5 mm	> 0.5 mm
Focused beam size[mm] at 300mm		Dot >0.02, thickness >0.01 Multi Dot >1, thickness >1	Dot >0.04, thickness >0.01	Dot >0.02, thickness >0.01	Dot >0.04, thickness >0.01
Mode		TEM00, Multi-mode	TEM00	TEM00	TEM00
Input voltage		5 ~ 12 V			
Consumption current		Max. 1.8 A	Max. 1.8 A	Max. 1.2 A	Max. 1.2 A
Laser Diode type		P or N-type or other			
Dimension		67 × 167 × 55 mm			
Outside Material		Aluminum anodizing			
Lifetime at room temp.		20,000 hours			
Operating Temperature		-10 ~ 40 °C			
Storage Temperature		-30 ~ 80 °C			
Options		빔 사양, TTL Modulation < 1 MHz			
Remarks		*설치시에 방열구조 필요 *과도한 충격을 금해주시고, 강한 모터나 전자기파 주변에 설치하는 것을 피해주시시오.			

『Optical / Electrical features』

Items		Features			
Wavelength		785nm	808nm	830nm	850nm
Output Power		~10, ~35, ~45mW	~80mW, Multi ~180, ~450mW ~0.9, ~1.8, ~2.7W	~25, ~45, ~80, Multi ~180mW	~25, ~45, ~80, Multi ~180mW, ~0.9W
Output Power stability		< ± 1%	< ± 1% Multi more 0.9W< ± 5%	< ± 1%	< ± 1%
Beam type & size(thickness) at 3m ■ Optional	Dot (Divergence)	∅1, ∅2, 3×2 (< 0.1 mrad)	∅2 (<0.1mrad) Multi 2×1, 5×2 (< 2 mrad)	∅2 (<0.1mrad) Multi 2×1, 5×2 (< 2 mrad)	∅2 (<0.1mrad) Multi 2×1, 5×2 (< 2 mrad)
	*1 Gaussian/Non-gaussian line	> 1 mm	> 1 mm, Multi > 2 mm	> 1 mm, Multi > 2 mm	> 1 mm, Multi > 2 mm
	*2 Diffractive Line/Cross	> 0.5 mm	> 0.5 mm, Multi > 3 mm	> 0.5 mm, Multi > 3 mm	> 0.5 mm, Multi > 3 mm
	*3 DCE pattern	> 0.5 mm	> 0.5 mm, Multi > 3 mm	> 0.5 mm, Multi > 3 mm	> 0.5 mm, Multi > 3 mm
Focused beam size[mm] at 300mm		Dot >0.05, thickness >0.02	Dot >0.02, thickness >0.01 Multi Dot >1, thickness >1	Dot >0.02, thickness >0.01 Multi Dot >1, thickness >1	Dot >0.02, thickness >0.01 Multi Dot >1, thickness >1
Mode		TEM00	Multi-mode	TEM00	TEM00
Input voltage		5 ~ 12 V			
Consumption current		Max. 1.2 A	Max. 3.5 A	Max. 1.2 A	Max. 2.5 A
Laser Diode type		P or N-type or other			
Dimension		67 × 167 × 55 mm			
Outside Material		Aluminum anodizing			
Lifetime at room temp.		20,000 hours			
Operating Temperature		-10 ~ 40 °C			
Storage Temperature		-30 ~ 80 °C			
Options		빔 사양, TTL Modulation < 1 MHz			
Remarks		*설치시에 방열구조 필요 *과도한 충격을 금해주시고, 강한 모터나 전자기파 주변에 설치하는 것을 피해주시시오.			

『Optical / Electrical features』

Items		Features			
Wavelength		905nm	980nm		
Output Power		~15mW	~80mW		
Output Power stability		< ± 1%	< ± 1%		
Beam type & size(thickness) at 3m ■ Optional	Dot (Divergence)	∅1, ∅2, 3×2 (< 0.1 mrad)	∅1, ∅2, 3×2 (< 0.1 mrad)		
	*1 Gaussian/Non-gaussian line	> 1 mm	> 1 mm		
	*2 Diffractive Line/Cross	> 0.5 mm	> 0.5 mm		
	*3 DOE pattern	> 0.5 mm	> 0.5 mm		
Focused beam size[mm] at 300mm		Dot >0.05, thickness >0.02	Dot >0.05, thickness >0.02		
Mode		TEM00	TEM00		
Input voltage		5 ~ 12 V			
Consumption current		Max. 1.2 A	Max. 1.5 A		
Laser Diode type		P or N-type or other			
Dimension		67 × 167 × 55 mm			
Outside Material		Aluminum anodizing			
Lifetime at room temp.		20,000 hours			
Operating Temperature		-10 ~ 40 °C			
Storage Temperature		-30 ~ 80 °C			
Options		빔 사양, TTL Modulation < 1 MHz			
Remarks		*설치시에 방열구조 필요 *과도한 충격을 금해주시고, 강한 모터나 전자기파 주변에 설치하는 것을 피해주시오.			