

NEOARK

GaN Laser Element incorporated
Compact Type Diode 5mW~1W

**Thermo Controller Type LD Module
UV, Violet, Blue and Aqua**



Wide range of wavelength and lasing output

Compact, Rigid, Long life time and high reliability

High stability of wavelength and high power are realized by

ACC type power supply and thermo control unit

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UV 375nm

Violet 408nm

Blue 440nm & 470nm

Laser Diode Module

Compact and light weight diode laser

Diode laser has the property that wavelength stability of life time is influenced by thermal fluctuation. Our unit is incorporated with Peltier type thermal control unit to reduce the said influence. And laser element can be replaced by new one.

Specification:

	UV	Violet		Blue		Aqua
Wavelength	375nm±5nm	408nm±7nm	408nm±7nm	440±5nm		470/488nm±5nm
Output of LD	20/150mW	30/60mW	400mW	50mW	500mW/1W	5/20mW
Beam diameter	About 8 × 4mm (f=15) / About 3 X 1.5mm(f=4.5)					
Element	GaN (Sapphire substrate)					
Transverse mode	Single		Multi	Single	Multi	Single
Thermo control	Electronic cooling					

Application:

- Substitution of He-Cd (441.6nm), Ar (488.0nm)
- LIF light source, Photo-luminescence light source
- Evaluation of optical recording media, stereolithography
- UV spectrum analysis, UV spectroscopic magnetic Property evaluation



Variety:

UV	375±5nm	TC20-3720-4.5/15	20/150mW
Violet	408±7nm	TC20-4030-4.5/15	30mW
		TC20-4060-4.5/15	60mW
		TC35-40400-4.5/15	400mW
Blue Violet	440±5nm	TC35-4450-4.5/15	50mW
		TC35-44500-4.5/15	500mW/1W
Aqua	470±5nm	TC20-4705-4.5/15	5/20mW
Aqua	488±5nm	TC20-4805-4.5/15	5/20mW

TC20 Type Temperature Stabilized Laser Diode Module

By incorporation of Peltier element in laser head, it is designed to stabilize temperature of LD, and to realize stabilization of output and wavelength, as well as operation in high temperature environment, and long life time. (In case of 200mW laser, 35 ϕ)

● Laser Head with radiation holder



TC20/35 Type Head (TC20-0000-00) Specification		
Collimator lens	High performance single lens (focus adjustable)	
Lens NA	0.2	0.4
Focus distance	f=15mm	f=4.5mm
Beam diameter	About 8mm × 4mm	About 3mm × 1.5mm
Output efficiency	About 50%	About 70%
Focusing range	100mm ~ ∞	20mm ~ ∞

※Customized LD element can be incorporated on request.

● Power Supply



Power Supply (ACC with thermo controller) DPS-5004 Specification	
Thermo control	PID control by Peltier
Working temperature	15°C ~ 50°C
Temperature set-up range	25°C ~ 40°C 0.1°C step
Thermo control range	Set-up temperature $\pm 10^\circ\text{C}$
Thermo stability	$\pm 0.005^\circ\text{C}$ (in case of constant working temperature)
Set-up current	Maximum 100mA
Modulation band	DC ~ 1MHz (Analogue, sine wave response)
Outer dimension	162 (W) X 85 (H) X 181 (D) mm
LD drive	ACC

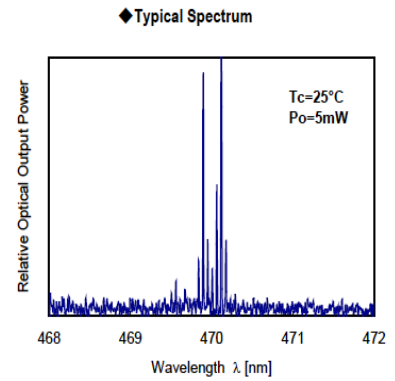
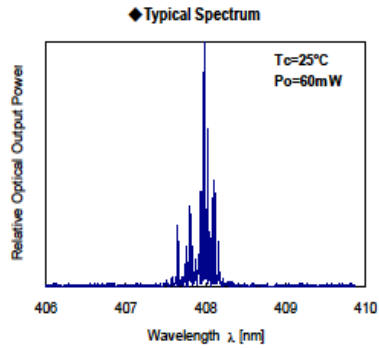
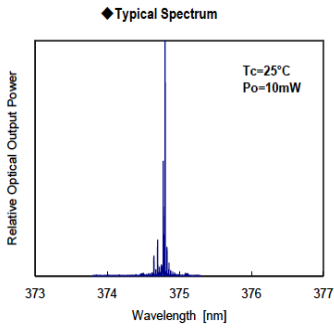
● Laser Head With radiation fin



Outer dimension: $\phi 25 \times 65\text{mm}$

* For Model TC20-3720-4.5/15 (150mW), TC35-40400-4.5/15 and TC35-44500-4.5/15:
DPS-5004XP power supply shall be applied.

Lasing Spectrum



[Caution]

- * Life time of laser element is around 5,000 hours to 6,000 hours in average.
- * Laser unit shall be operated in 20 to 30 C. degree temperature working environment.
- * Specification may be changed without prior notice.
- * For details of LD element, kindly contact directly NICHIA Corporation.
- * Laser safety measures shall be secured by a customer as per the instruction of NEOARK Corporation.

UV LED Illumination Unit

Wavelength	365nm
Lasing power	100mW
Actual output power	50mW
Minimum spot diameter	About 1mm
Focus adjusting mechanism	Attachable
External ON/OFF control	Option



Please visit our website to check our other products.
<http://www.neoark.co.jp>