



Diode Lasers Used in Medical Applications

A variety of medical applications today utilize diode lasers because of their compact size, brightness, reliability and increased power in delivering the utmost performance.

Diode lasers are used in many significant medical applications such as photodynamic therapy (PDT) or therapeutics, aesthetics, diagnostics and surgical treatment. Enabling diode laser technologies offer many advantages such as a bloodless operating field, minimal swelling and scarring and less or no post-surgical pain.

To meet the demanding needs of our OEM customers, DILAS offers products for medical applications in a wide range of wavelength configurations from 405 nm-2300 nm, including fiber-coupled modules, stacked arrays, direct beam and others.

Applications

- Aesthetics
- Diagnostics
- Photodynamic therapy
- Surgical treatment
- Dermatology



Aesthetics

- 405 - 450 nm, 810 - 1064 nm, 1210 nm, 1470 nm for specific absorption in tissue
- Hair and wrinkle removal
- Lipolysis
- Tooth whitening



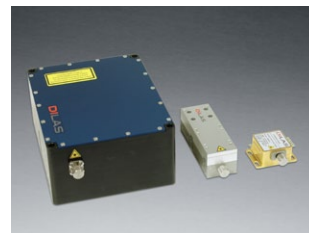
Diagnostics

- 794.7 nm for rubidium pumping
- Enhanced magnetic resonance imaging (MRI)



Photodynamic Therapy

- Fiber-coupled modules at 405 - 450 nm, 635 - 670 nm, 689 nm, 752 nm
- Up to 25W
- High-coupling efficiency, high-brightness
- Field exchangeable blast shield
- Cancer treatment and wound healing



Surgical Treatment

- 980 - 1940 nm for high absorption in tissue
- Scalable CW output power
- Fiber-coupled, multi-wavelength modules
- Benign prostatic hyperplasia (BPH), dental, general surgery, endovenous treatment



Applications	Type	Wavelength (nm)																			
		405	450	635	652	670	689	752	766	794	810	915	940	980	1064	1210	1320	1470	1550	1940	
Aesthetics	Acne Treatment		x																	x	
	Hair and Wrinkle Removal								x		x	x			x						
	Laser Skin Resurfacing										x	x									
	Lipolysis															x	x				
	Pigmented Lesions											x		x	x						
	Tooth Whitening											x			x						
	Varicose Vein Removal														x						
Diagnostics	MRI										x										
Photodynamic Therapy	Age-Related Macular Degeneration							x	x												
	Cancer Treatment				x	x	x														
	Wound Healing	x													x						
Surgical Treatment	Dental Treatment														x						
	Endovenous Treatment													x							
	General Surgery														x	x		x	x	x	x
	Microsurgery														x	x					
	Urology														x			x	x		