

Spectra Trading (Pty) Ltd

Reg No: 2025/525554/07

Diode Types & Specifications

Diode Type	Voltage Rating	Current Rating	Package Type	Key Features	Typical Applications
Standard Rectifier Diode	50V – 1000V	0.5A – 10A	DO-41, DO-201, SMD	One-way current flow, general-purpose	Power supplies, AC-DC conversion
Fast Recovery Diode	100V – 600V	1A – 10A	DO-15, TO-220, SMD	Low reverse recovery time	Switching power supplies, inverters
Schottky Diode	20V – 100V	0.1A – 30A	DO-41, TO-220, SMD	Low forward voltage drop, fast switching	Solar panels, RF circuits, high-speed switching
Zener Diode	2.4V – 200V	0.5W – 5W	DO-35, DO-41, SMD	Voltage regulation, reverse breakdown	Voltage clamping, protection circuits
Light Emitting Diode (LED)	1.8V – 3.6V	5mA – 100mA	Through-hole, SMD	Emits light when forward biased	Indicators, displays, lighting systems
Photodiode	5V – 30V	Signal-level	TO-46, SMD, radial	Converts light into electrical signal	Optical sensors, solar cells, IR receivers
Tunnel Diode	<1V	mA range	DO-7, glass encapsulated	Negative resistance region	Microwave oscillators, high-frequency amplifiers
Varactor Diode	2V – 30V	μA – mA range	DO-35, SMD	Voltage-controlled capacitance	RF tuning, voltage-controlled oscillators
TVS Diode (Transient Voltage Suppression)	5V – 440V	Up to 100A (pulse)	DO-214, SMD	Protects against voltage spikes	ESD protection, surge suppression

Laser Diode	1.5V – 2.5V	20mA – 100mA	TO-18, SMD	Emits coherent laser light	Optical drives, fiber optics, barcode scanners
Bridge Rectifier Module	50V – 1000V	1A – 50A+	DIP, metal case, SMD	Full-wave AC to DC conversion	Power supplies, motor drives, industrial control