

LAS010, LAS020 -- Light Activated Switches

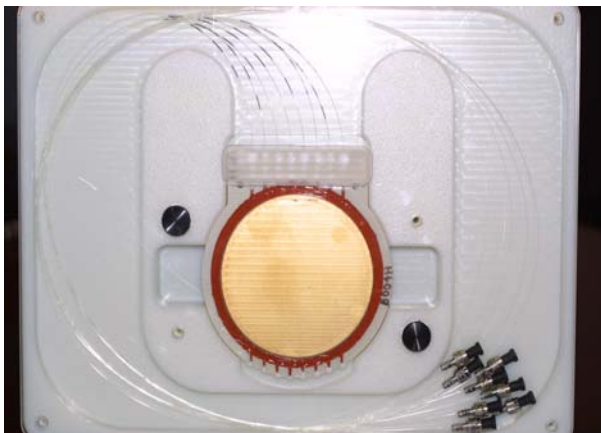
Preliminary Data Sheet

Features

- V_b 10 kV and 20 kV
- $I_{forward} > 100$ kA for < 75 μ s
- $I_{forward} > 50$ kA for < 135 μ s
- $I_{reverse} > 20$ kA for < 50 μ s
- Optical triggering*
 - Low jitter
 - Fast turn-on < 1 μ s
 - Sealed optical fibers
- Stackable for increased blocking voltage
 - 1200-1500 psi mounting pressure
 - Contact plates usable as heat sinks and water coolable
- Parallel current-sharing capable

* Optical trigger signal is fed to the thyristor via 8 fiber optic cables, each requiring minimum 100 μ J per fiber. OTC offers a light source model FCLS08 with 8 channel > 1 mJ per channel optical output.

Part No.	Leakage Current	Peak I
LAS010	< 200 μ A at 7 kV	110 kA
LAS020	< 200 μ A at 13 kV	80 kA

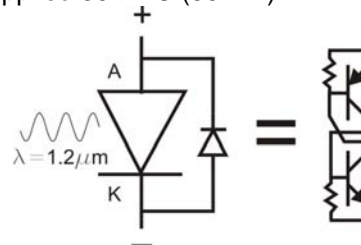


Description

The LAS010 and LAS020 are single-junction, large area (86 mm diameter) thyristors with blocking voltages of 10 kV and 20 kV respectively. Specially treated optical fibers are integrated into the wafer using OTC's patented optical gating structure that allows for uniform illumination of the entire active area of the wafer simultaneously. This results in the ability for full current conduction in the time of the optical trigger pulse rise-time. The optical fibers are sealed from the environment to ensure proper illumination pattern.

OTC's light source model FCLS08-1120 (shown above) is designed specifically as the optical trigger source. The unit is a solid state laser diode based design operating at 1120 nm, ensuring reliability and long operational life.

The 8 SMA fiber optic pigtails from the thyristor connect directly to the back of the unit. The light source operates on a user supplied 30 VDC (50 mA)



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