



ADVANCE PRODUCT DATA

STC DEFENCE SYSTEMS

OPTICAL DEVICES DIVISION
BRIXHAM ROAD
PAIGNTON
DEVON TQ4 7BE ENGLAND
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FEB 02 1987

STCE

T-41-05

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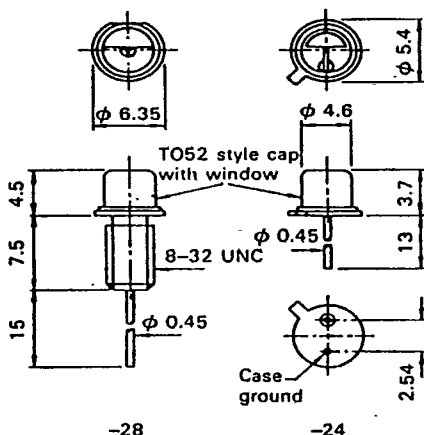
Pulsed Laser Diodes

OLZ LJ/LK series

Wavelength 850 nm

VERSIONS WITH WINDOW CAP

OUTLINE DRAWINGS



FEATURES

- * GaAs/GaAlAs Multiheterostructure chip, MOCVD (Metal Organic Chemical Vapour Deposition) semiconductor process.
- * Up to 100W peak radiant output power from multi-chip stack.
(Up to 20Wpk output from a single chip)
- * Operation over wide temperature range.
- * Choice of rugged package, both fully hermetic and free of any epoxy.
- * Package type -24 minimises inductance.
- * Custom (including fibre pigtail) versions may be considered on request.
- * Ideally suited for security, weapons simulation and ranging applications under severe enviromental conditions.

Dimensions: mm nominal

CHARACTERISTICS

Conditions: Case temperature, 25°C.
Pulse duty cycle, 0.025%.
Pulse width, 50ns.
Measurement aperture, f0.75.

DEVICE TYPE		LJ1	LJ6	LJ15	LJ20	LK30	LK50	LK100	Units
Parameter									
Peak Output Power, P_T		1	6	15	20	30	50	100	W
Maximum Forward Current I_f		5	12	25	35	25	35	35	A
(for rated output)									
Threshold current typical		1	1.5	2.5	3	2.5	3	3	A
Forward voltage typical		7	9	11	11	22	33	66	V
Emitting length typical		40	75	250	350	250	350	350	µm
Effective emitting width		2	2	2	2	110	220	550	µm
Number of chips in stack		1	1	1	1	2	3	6	

ALL TYPES

	Min.	Typ.	Max.	
Wavelength at peak intensity	825		870	nm
Spectral width, 50% intensity		5.0	9.0	nm
Beam Divergence		20 x 30		degrees

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Side 2

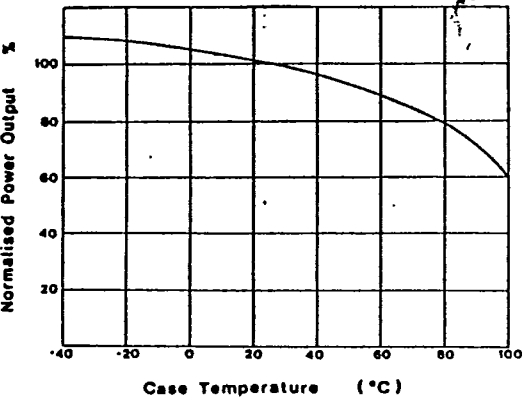
Pulsed Laser Diodes LJ/LK series

ABSOLUTE RATINGS

DEVICE TYPE		LJ1	LJ6	LJ15	LJ20	LK30	LK50	LK100	Unit
Peak output power	Φ_T	3	10	20	25	35	60	110	W
Forward current	I_f	6	15	30	37	30	37	37	A
Operating temperature		-45			to		+100		°C
Storage temperature		-45			to		+100		°C
Maximum pulse width					200				ns

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Output v Temperature



Devices are characterised at a pulse width of 50 ns and 0.025% duty cycle. The life expectation of these devices may be significantly reduced at higher peak current, pulse width and duty cycle.

Please consult STC for details of the maximum ratings and for operation at other pulse widths, forward current, duty factor, or output power.

ORDERING INFORMATION

Order No: LJ [] - []
or: LK [] - []

Type: Power :Case Style

Example : LK 50 - 28

Laser diode with 50W peak radiant output power from the window of a stud package.

Case negative, type -28 package is standard.

Case positive supplied to special order.(Add suffix P)

LJKWA070B.EB ISSUE B NOV. 02/86

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WARNING—Radiations emitted by these devices can be dangerous to the eyes and appropriate precautions must be taken in use. (ref. BS4803)

INVISIBLE LASER RADIATION.
CLASS 3B LASER PRODUCT
AVOID EXPOSURE TO BEAM

