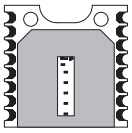
iC-LV BLCC LV4C

OPTO ENCODER PACKAGE SPECIFICATION

ORDERING INFORMATION

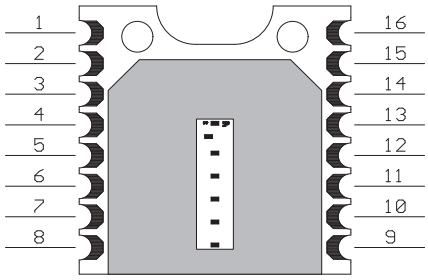
Type	Package	Options	Order Designation
iC-LV	BLCC LV4C		iC-LV BLCC LV4C



7.0 mm x 7.0 mm
RoHS compliant

PIN CONFIGURATION

(top view)



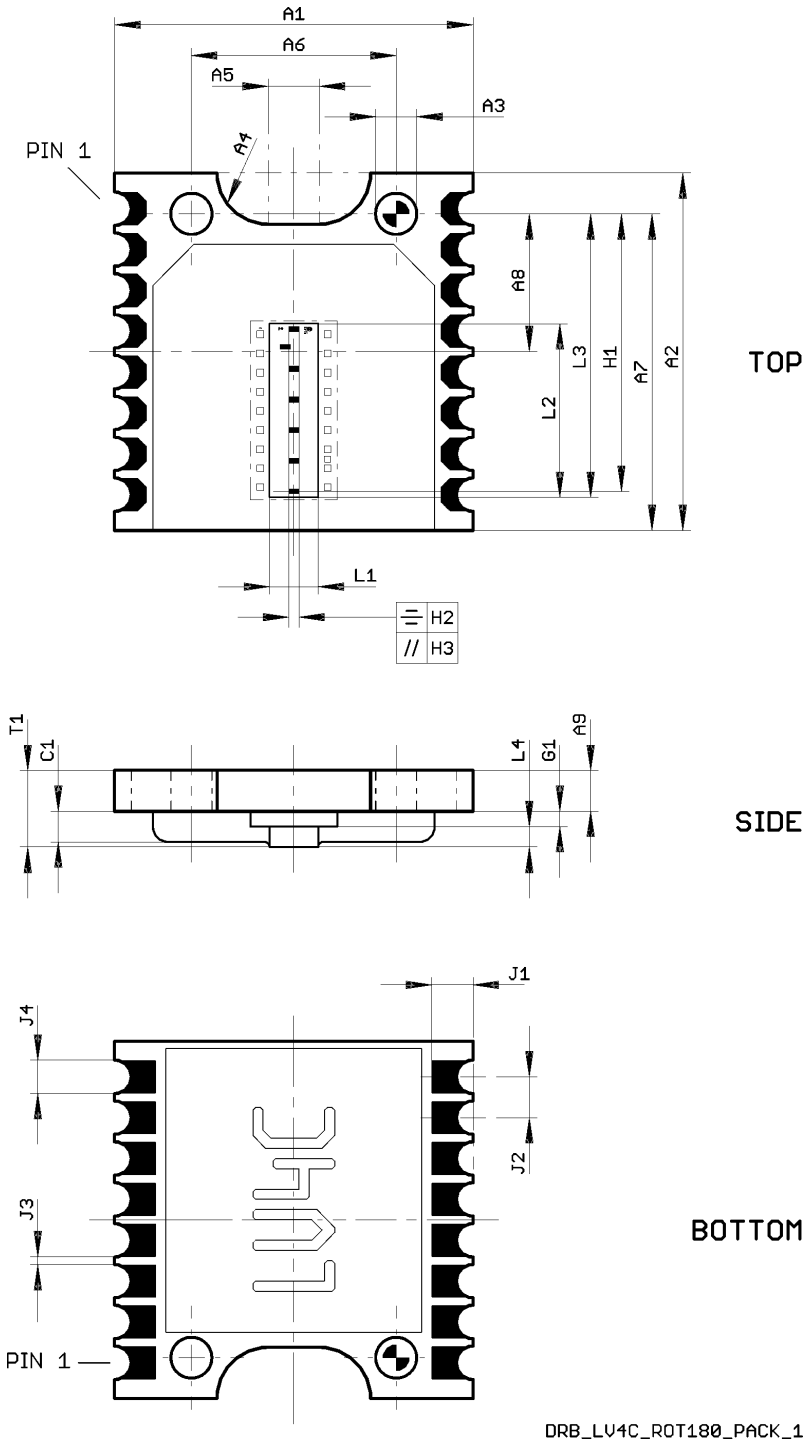
PIN FUNCTIONS

No.	Name	Function
1	LED	LED Power Control Output (high-side current source)
2	GND	Ground
3	SOUT	Serial Data Output (SSI) / Data Output D4
4	SERIN	Serial Data Input (SSI) / Data Output D3
5	SCLK	Clock Input (SSI) / Data Output D2
6	SYNM0	Synchronisation Mode Input / Data Output D1
7	SYNM1	Synchronisation Mode Input / Data Output D0
8	SEEN	Serial Error Bit Enable Input (high active)
9	n.c.	not connected
10	VCC	+4...+5.5 V Supply Voltage
11	NINV	Bit-wise Inversion Input (low active)
12	MODE	Operating Mode Selection Input
13	TEST	Test Mode Enable Input (high active)
14	RSET	LED Power Control Adjustment (wiring is optional)
15	NERR	Error Output (low active)
16	NDIR	Reversal of Rotation Dir. Input (low active)

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Parameter	Conditions	Fig.	Min.	Typ.	Max.	Unit
TG1	Ta	Operating Ambient Temperature Range			-40		125	℃
TG2	Ts	Storage Temperature Range			-40		125	℃
TG3	Tpk	Reflow Soldering Peak Temperature	tpk < 20 s, convection reflow tpk < 20 s, vapour phase TOL (time on label) 8 h; please refer to customer information file No. 7 for details				260 230	℃ ℃

PHYSICAL DIMENSIONS



DIMENSION TABLE

Item	Parameter	Comments	Min.	Typ.	Max.	Tolerance	Unit
	Substrate						
A1	Outline X			7.0		±0.2	mm
A2	Outline Y			7.0		±0.1	mm
A3	Alignment Hole Diameter	alignment hole center is reference		0.8		+0.05	mm
A4	Cut-Out Radius			1.0			mm
A5	Cut-Out Centers			1.0			mm
A6	Hole to Hole Pitch	tolerance applies also to Y-direction		4.0		±0.08	mm
A7	Outline vs. Reference Y			6.2		±0.15	mm
A8	Reference vs. Center Y			2.7		±0.15	mm
A9	Substrate Thickness	bottom package to bottom die	0.75	0.80	1.00		mm
	Encapsulation						
C1	Mold Thickness	note [1])	0.50		0.70		mm
	Chip Placement						
G1	Chip Thickness			0.30			mm
H1	Chip Position vs. Reference Y	center of photodiode		5.44		±0.15	mm
H2	Chip Symmetry				0.4		mm
H3	Chip Parallelism				0.1		mm
	Bottom Metal Pattern						
J1	Lead Size			0.8		±0.15	mm
J2	Lead Pitch (or Lead-Lead Distance)	not accumulative		0.8		±0.08	mm
J3	Lead-Lead Spacing			0.15		±0.05	mm
J4	Lead Size			0.65		±0.05	mm
	Glass Cover						
L1	Glass Size X			0.95		±0.05	mm
L2	Glass Size Y			3.40		±0.05	mm
L3	Glass Position vs. Reference Y			5.55			mm
L4	Glass Thickness			0.40			mm
	Thickness Specifications						
T1	Overall Thickness	note [1]) bottom substrate to top of glass	1.38		1.80		mm

Notes: [1]) nominal glass thickness of 0.4 mm

REVISION HISTORY

Rev	Notes	Pages affected
A1	Initial version	
A2	Table Pin Functions corrected	1
A3	Revision of pin layout (pad RC not connected)	1
A4	Revision of Absolute Maximum Ratings (TG3) Reflow Soldering; Physical Dimensions, Dimension Table Item H3 added; Minor changes	1, 2, 3

GENERAL HANDLING INSTRUCTIONS

After opening the dry pack, devices must be mounted within 8 hours (in factory conditions of maximum 30℃ / 60% RH) or must be stored at <10% RH. Devices require baking before mounting if the Humidity Indicator Card shows >10% when read at 23℃ ±5℃ or if the conditi ons mentioned above are not met. Devices may be baked for 72 hours at 100℃ using high-temperature device containers (trays).

Samples
Samples may not be subject for dry pack delivery, and, in that case, are not intended for reflow soldering.