

iC-LSHB optoBGA LSH2C

OPTO ENCODER PACKAGE SPECIFICATION



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ORDERING INFORMATION

Type	Package	Options	Order Designation
iC-LSHB	oBGA LSH2C	reticle	iC-LSHB oBGA LSH2C -xxR

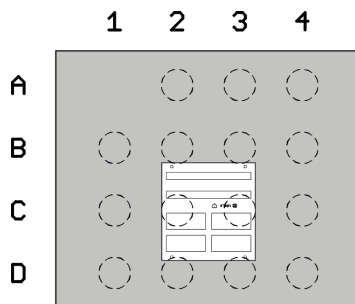


6.2 mm x 5.2 mm
RoHS compliant

PIN CONFIGURATION

PIN FUNCTIONS

(top view)



No.	Name	Function
A2		
A3		
A4		
B1		
B2		
B3		
B4		
C1		
C2		
C3		
C4		
D1		
D2		
D3		
D4		

For pinout information please refer to the relevant IC data sheets.

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Parameter	Conditions	Fig.				Unit
					Min.	Typ.	Max.	
TG1	Ta	Operating Ambient Temperature Range (extended temperature range on request)			- 40		110	°C
TG2	Ts	Storage Temperature Range			- 40		110	°C
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				245 230	°C °C

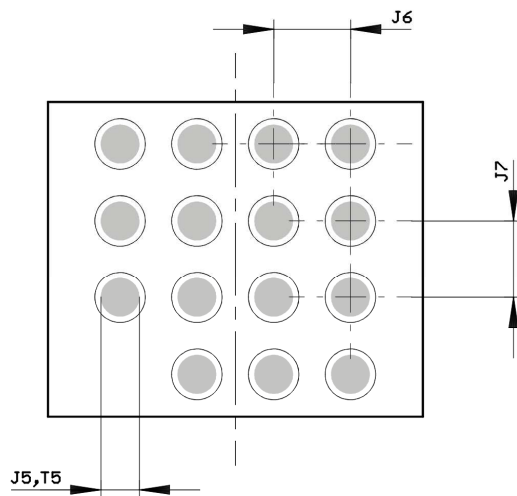
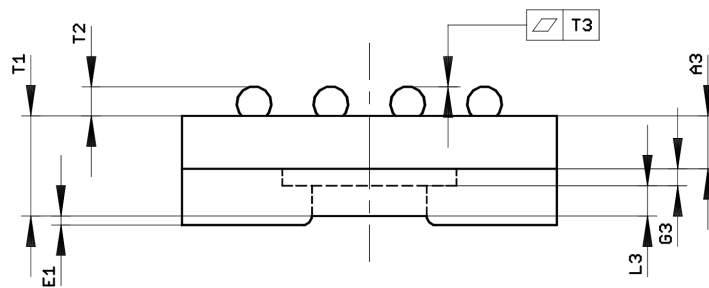
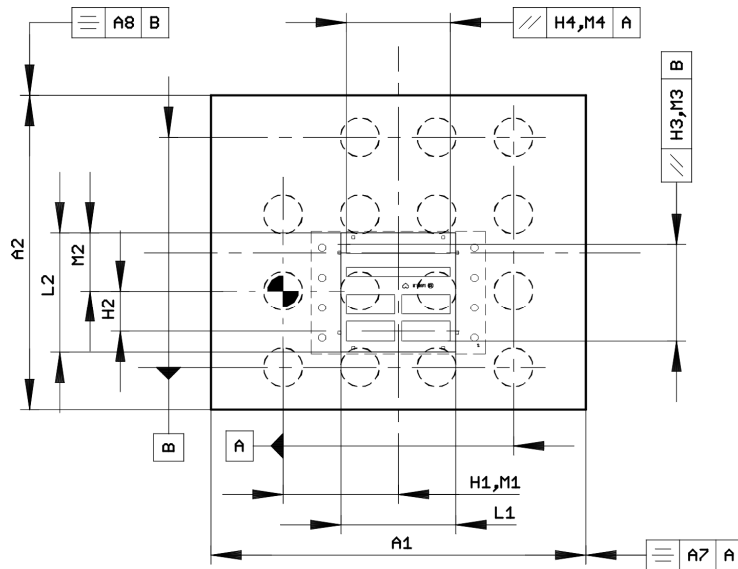
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PHYSICAL DIMENSIONS



DIMENSION TABLE

Item	Parameter	Conditions					Unit
			Min.	Typ.	Max.	Tolerance	
Substrate							
A1	Outline X			6.2		±0.1	mm
A2	Outline Y			5.2		±0.1	mm
A3	Substrate Thickness	bottom package to bottom die		0.87			mm
A7	Outline Symmetry vs. Bottom Metal X				0.20		mm
A8	Outline Symmetry vs. Bottom Metal Y				0.20		mm
Chip Placement							
G3	Chip Thickness			0.30			mm
H1	Sensor Array Position vs. Bottom Metal X	center of array		1.905		±0.15	mm
H2	Sensor Array Position vs. Bottom Metal Y	center of outermost photodiodes (radius "RA")		0.670		±0.15	mm
H3 H4	Parallelism Sensor Array vs. Bottom Metal				0.1		mm
Bottom Metal Pattern							
J5	Lead Diameter			0.635		±0.03	mm
J6	Lead Pitch X (or Lead-Lead Distance X)			1.27			mm
J7	Lead Pitch Y (or Lead-Lead Distance Y)			1.27			mm
Glass/Reticle Cover							
L1	Glass / Reticle Size X			1.9			mm
L2	Glas / Reticle Size Y			1.98			mm
L3	Glass / Reticle Thickness	glass / reticle reticle		0.40 0.50			mm mm
M1	Glass / Reticle Position vs. Bottom Metal X			1.905			mm
M2	Glass / Reticle Position vs. Bottom Metal Y			0.965			mm
M3 M4	Parallelism Reticle-Pattern vs. Bottom Metal				0.15		mm
Encapsulation							
E1	Coating Excess	surface glass to surface coating			0.05		mm
Thickness Specifications							
T1	Overall Thickness	bottom substrate to top of glass / reticle ¹⁾	1.40	1.60	1.85		mm
		bottom substrate to top of reticle ²⁾	1.50	1.70	1.95		mm
T2	Solder Ball Height	drawing not to scale	0.40		0.54		mm
T3	Solder Ball Coplanarity					±0.05	mm
T5	Solder Ball Diameter			0.635			mm

Notes: 1) nominal glass / reticle thickness of 0.4 mm
 2) nominal reticle thickness of 0.5 mm

REVISION HISTORY

Rev	Notes	Pages affected
A1	Initial version	
A2	Ordering Information / Pin Configuration: drawings revised; Physical Dimensions / Dimension Table: drawing revised, items A7, A8 added, L2 corrected; Disclaimer update	all
A3	Dimension Table: items L3, T1 changed	3
A4	Absolute Maximum Ratings: Operating Ambient Temperature Range extended, Storage Temperature Range adapted; TG3: Conditions: convection reflow changed from 260°C to 245°C; Dimension Table: Item T1 conditions corrected	1, 3
B2	Dimension Table: items L3, T1, T2 changed; Disclaimer update	3, 4

GENERAL HANDLING INSTRUCTIONS

After opening the dry pack, devices must be mounted within 8 hours (in factory conditions of maximum 30 °C / 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 °C ± 5 °C or if the conditions mentioned above are not met. Devices may be baked for 72 hours at 100 °C 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.

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