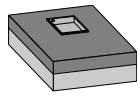
iC-LQNP OBGA LQ1C
PACKAGE SPECIFICATION

ORDERING INFORMATION

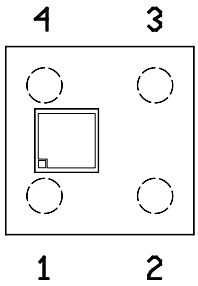
Type	Package	Options	Order Designation
iC-LQ	optoBGA™ LQ1C	none	iC-LQ OBGA LQ1C



3.4 mm x 3.4 mm

PIN CONFIGURATION

(top view)



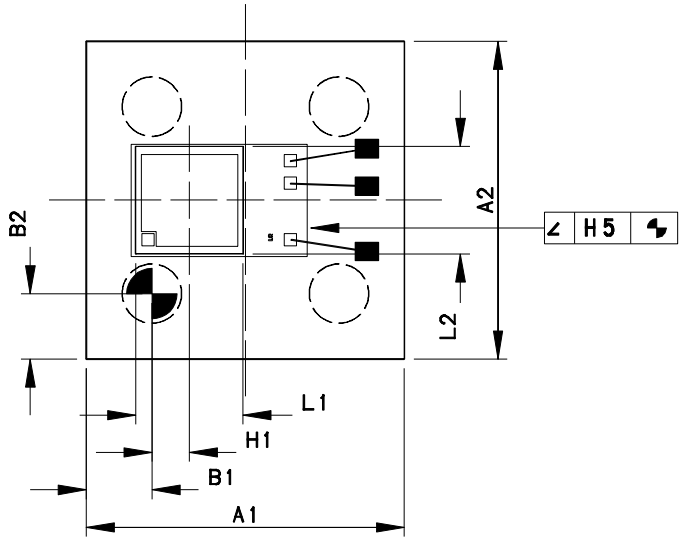
PIN FUNCTIONS

No.	Name	Function
1	GND	Ground
2	VCC	+4.5 to +13.2 V Supply Voltage
3	OUT	Current Output
4	GND	Ground

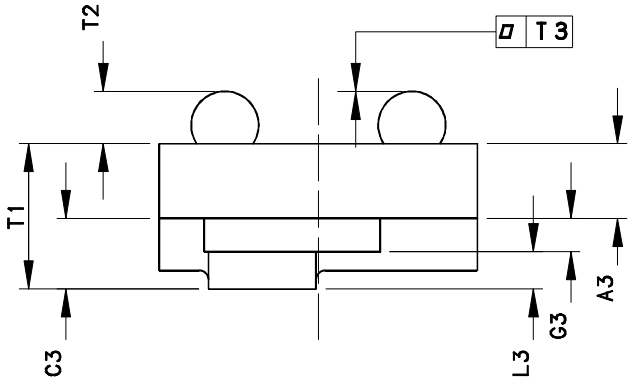
ABSOLUTE MAXIMUM RATINGS

Item No.	Symbol	Parameter	Conditions	Fig.	Min.	Typ.	Max.	Unit
TG1	Ta	Operating Ambient Temperature Range (extended temperature range on request)			-25		90	°C
TG2	Ts	Storage Temperature Range			-30		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 #7 for details				245 230	°C °C

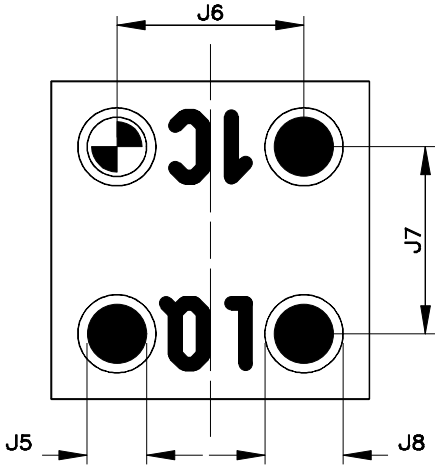
PHYSICAL DIMENSIONS



TOP



SIDE



BOTTOM

iC-LQ_LQ1C_PACK_1

DIMENSION TABLE

Item	Parameter	Comments	Min.	Typ.	Max.	Tolerance	Unit
	Substrate						
A1	Outline X			3.4		±0.1	mm
A2	Outline Y			3.4		±0.1	mm
A3	Substrate Thickness	bottom package to bottom die	0.783	0.87	0.957		mm
	Reference						
B1	Outline vs. Reference X	lead center bottom left is reference		0.7		±0.1	mm
B2	Outline vs. Reference Y			0.7		±0.1	mm
	Encapsulation						
C3	Mold Thickness	note 1)	0.5		0.8		mm
	Chip Placement						
G3	Chip Thickness			0.3		±0.025	mm
H1	Chip Position vs. Reference X	referenced vs. center of sensor		0.4		±0.195	mm
H2	Chip Position vs. Reference Y	referenced vs. center of sensor		1.0		±0.195	mm
H5	Chip Tilt Angle vs. Paddle					±1.6	DEG
	Bottom Metal Pattern						
J5	Lead Size			0.635		±0.03	mm
J6	Lead Pitch X (or Lead-Lead Distance X)			2.0			mm
J7	Lead Pitch Y (or Lead-Lead Distance Y)			2.0			mm
J8	Solder Stop Off			0.835		±0.1	mm
	Glass Cover						
L1	Glass Size X			1.15		±0.05	mm
L2	Glass Size Y			1.15		±0.05	mm
L3	Glass Thickness			0.4		±0.03	mm
	Thickness Specifications						
T1	Overall Thickness	note 1), bottom substrate to top of glass	1.428		1.712		mm
T2	Solder Ball Height		0.36		0.5		mm
T3	Solder Ball Coplanarity				100		µm

Notes: 1) nominal glass cover thickness of 0.4 mm

REVISION HISTORY

Rev	Notes	Pages affected
A1	Initial version	all
B1	RoHS compliance	all
C1	Convection reflow soldering peak temperature reduced to 245 °C	1, 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 are not subject to dry pack delivery and are not intended for reflow soldering.