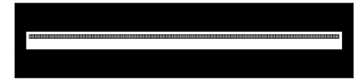
iC-LFL1402 OBGA LFL1C

PACKAGE SPECIFICATION

ORDERING INFORMATION

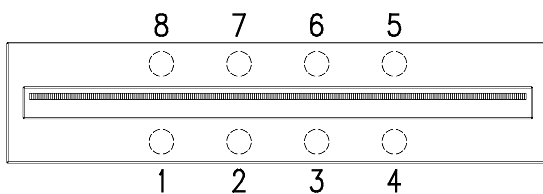
Type	Package	Options	Order Designation
iC-LFL	optoBGA™ LFL1C	none	iC-LFL OBGA LFL1C



17.7 mm x 3.9 mm

PIN CONFIGURATION

(top view)



PIN FUNCTIONS

No.	Name	Function
1	SI	Start Integration Input
2	CLK	Clock Input
3	AO	Analogue Output
4	VCC	+5 V Supply Voltage
5	RSET	Bias Current Adjust
6	AGND	Analog Ground
7	GND	Digital Ground
8	DIS	Disable Integration Input

ABSOLUTE MAXIMUM RATINGS

Item No.	Symbol	Parameter	Conditions	Fig.	Min.	Typ.	Max.	Unit
TG1	Ta	Operating Ambient Temperature Range			-40		100	°C
TG2	Ts	Storage Temperature Range			-40		115	°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

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PHYSICAL DIMENSIONS (given in mm)

TOP

SIDE

BOTTOM

DRA_LFL1C_PACK_1

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DIMENSION TABLE

Item	Parameter	Comments	Min.	Typ.	Max.	Tolerance	Unit
	Substrate						
A1	Outline X			17.7		±0.1	mm
A2	Outline Y			3.9		±0.1	mm
A3	Substrate Thickness	bottom package to bottom die	0.819	0.91	1.001		mm
	Reference						
B1	Outline vs. Reference X	lead center bottom left is reference		5.051		±0.225	mm
B2	Outline vs. Reference Y			0.68		±0.225	mm
	Encapsulation						
C1	Mold Thickness	note [1])	0.5		0.9		mm
	Chip Placement						
G3	Chip Thickness			0.3		±0.025	mm
H1	Chip Position vs. Reference X	reference vs. center of 1st sensor		4.288		±0.2	mm
H2	Chip Position vs. Reference Y	reference vs. center of 1st sensor		1.479		±0.2	mm
	Chip Position vs. Paddle Center					±0.05	mm
	Paddle Center vs. Reference					±0.125	mm
H3	Chip Tilt Angle					±1.6	DEG
	Bottom Metal Pattern						
J1	Lead Size			0.75		±0.03	mm
J2	Lead Pitch X (or Lead-Lead Distance X)			2.54			mm
J3	Lead Pitch Y (or Lead-Lead Distance Y)			2.54			mm
J4	Solder Stop Opening			0.95		±0.1	mm
	Glass Cover						
L1	Glass Size X			16.53		±0.05	mm
L2	Glass Size Y			1.0		±0.05	mm
L3	Glass Thickness			0.5		±0.05	mm
	Thickness Specifications						
T1	Overall Thickness	bottom substrate to top of glass (nominal glass cover thickness of 0.5 mm)	1.508		1.857		mm
T2	Solder Ball Height	drawing not to scale		0.6			mm
T3	Solder Ball Coplanarity					±0.05	mm

Notes: [1]) adjusted to glass top surface

REVISION HISTORY

Rev	Notes	Pages affected
A1	Initial version	all
A2	Item L1 corrected	2, 3
A3	Dimension Table items A3, L3, T1 changed; General Handling Instructions changed	3, 4
B1	RoHS compliance	1, 4
B2	Dimension Table items C1, T1 corrected	3
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. Remove any protective film – if present – before tempering or soldering. Use tweezers, pull upwards slowly, any horizontal pulling must be avoided. Do not touch the iC surface after removing the film. Never press on the iC coating.

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We understand suitable application of our published designs to be state-of-the-art technology which can no longer be classed as inventive under the stipulations of patent law. Our explicit application notes are to be treated only as mere examples of the many possible and extremely advantageous uses our products can be put to.