# iC-LFL1402 OBGA LFL1C
PACKAGE SPECIFICATION



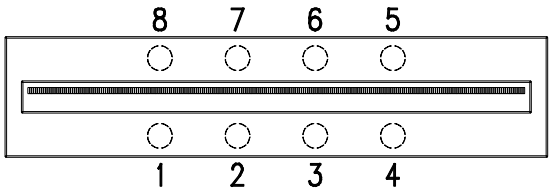
## ORDERING INFORMATION

| 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 | Tl | Lead Temperature | Refer to Customer Information #7, see dry pack label for details | | | | | °C |



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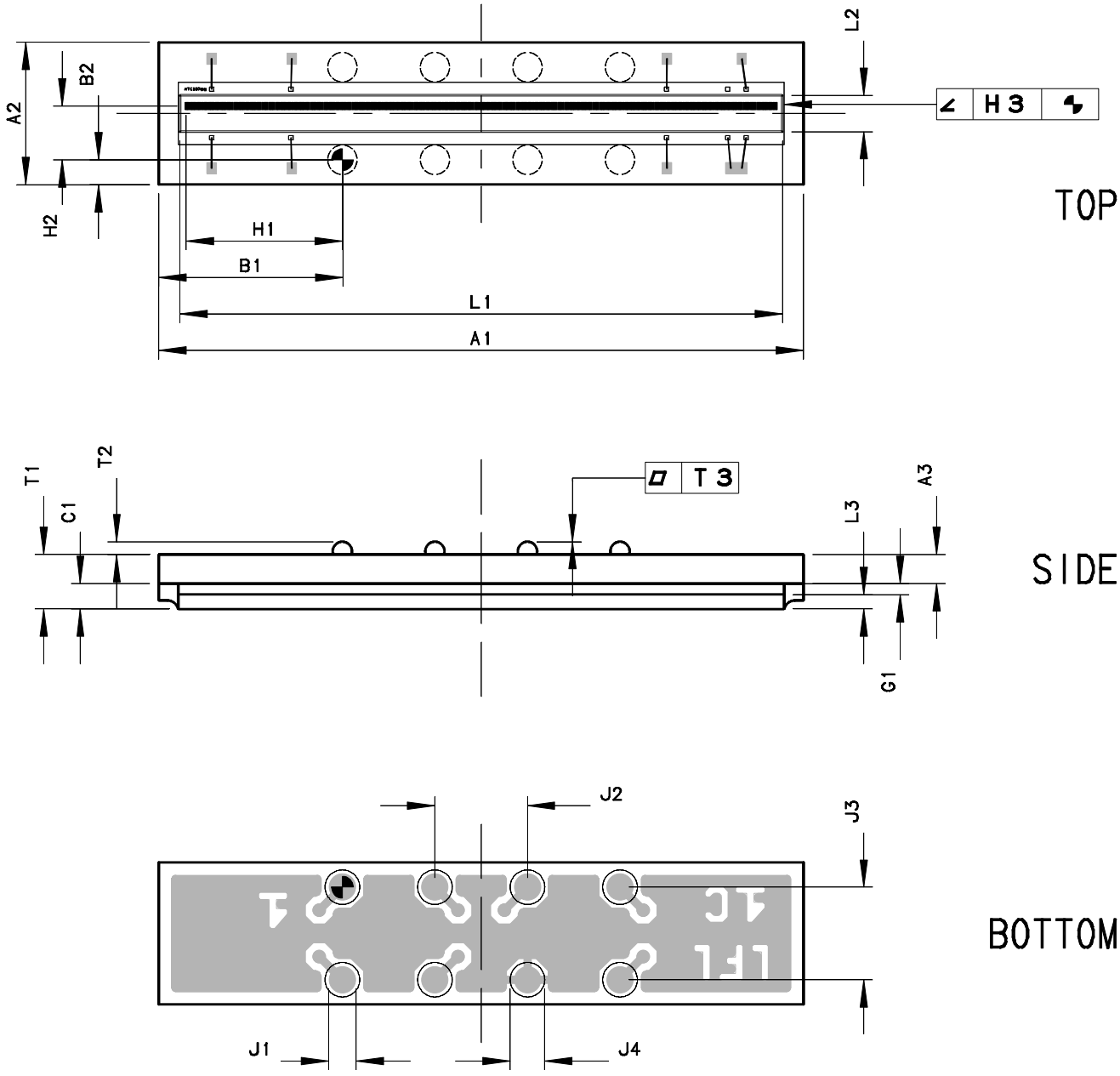
## PHYSICAL DIMENSIONS (given in mm)




DRA_LFL1C_PACK_1

## 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;<br>General Handling Instructions changed | 3, 4 |
| B1 | RoHS compliance | 1, 4 |
| B2 | Dimension Table items C1, T1 corrected | 3 |
| | | |

## 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.