

iC-LSHB optoBGA LSH2C

PHOTOSENSOR PACKAGE SPECIFICATION

preliminary



Rev A2, Page 1/4

ORDERING INFORMATION

| Type | Package | Options | Order Designation |
|---------|------------|---------|---------------------------|
| iC-LSHB | oBGA LSH2C | reticle | iC-LSHB oBGA LSH2C LSHxxR |

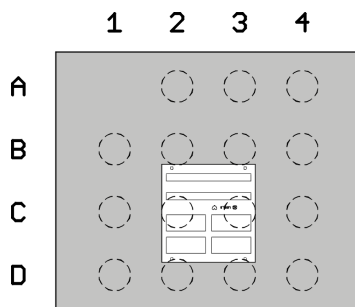


6.2 mm x 5.2 mm
RoHS compliant

PIN CONFIGURATION

PIN FUNCTIONS

(top view)



| No. | Name | Function |
|-----|------|----------|
| A2 | N.C. | |
| A3 | N.C. | |
| A4 | N.C. | |
| B1 | N.C. | |
| B2 | N.C. | |
| B3 | N.C. | |
| B4 | N.C. | |
| C1 | NCOS | |
| C2 | PCOS | |
| C3 | NZ | |
| C4 | GND | |
| D1 | NSIN | |
| D2 | PSIN | |
| D3 | VCC | |
| D4 | PZ | |

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) | | | -20 | | 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 file No. 7 for details | | | | 260 230 | °C °C |

iC-LSHB optoBGA LSH2C

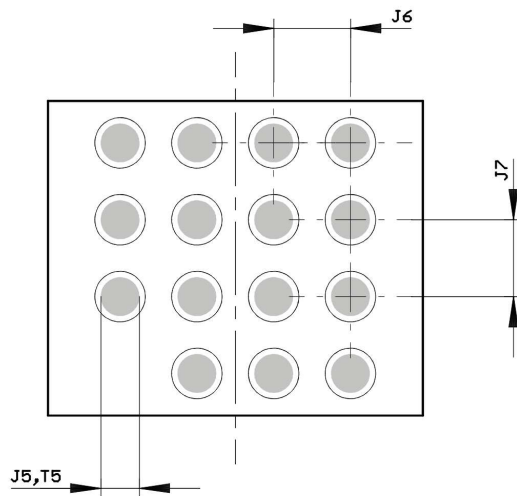
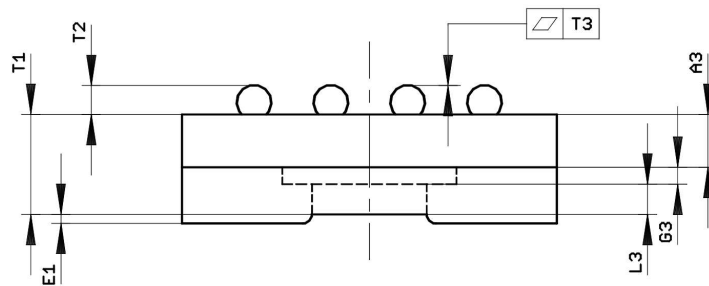
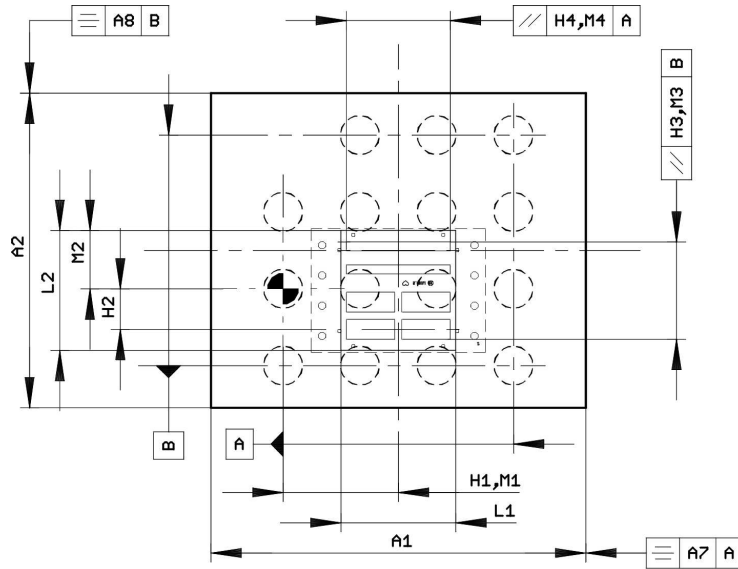
PHOTOSENSOR PACKAGE SPECIFICATION

preliminary



Rev A2, Page 2/4

PHYSICAL DIMENSIONS



iC-LSHB optoBGA LSH2C

PHOTOSENSOR PACKAGE SPECIFICATION

preliminary



Rev A2, Page 3/4

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 | Outside Track Radius "RA" vs. Bottom Metal Y | iC-LSHB with reticle LSHB5R | | 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 | Glass/Reticle Size Y | | | 1.98 | | | mm |
| L3 | Glass/Reticle Thickness | | | 0.5 | | | mm |
| M1 | Glass/Reticle Position vs. Bottom Metal X | | | 1.905 | | | mm |
| M2 | Glass/Reticle Position vs. Bottom Metal Y | iC-LSHB with reticle LSHB5R | | 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 (nominal glass cover thickness of 0.5 mm) | 1.5 | | 1.85 | | mm |
| T2 | Solder Ball Height | drawing not to scale | 0.36 | | 0.5 | | mm |
| T3 | Solder Ball Coplanarity | | | | | ±0.05 | mm |
| T5 | Solder Ball Diameter | | | 0.635 | | | mm |

iC-LSHB optoBGA LSH2C

PHOTOSENSOR PACKAGE SPECIFICATION

preliminary



Rev A2, Page 4/4

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 updated | all |
| | | |
| | | |

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.

iC-Haus expressly reserves the right to change its products and/or specifications. An info letter gives details as to any amendments and additions made to the relevant current specifications on our internet website www.ichaus.com/infoletter; this letter is generated automatically and shall be sent to registered users by email.

Copying – even as an excerpt – is only permitted with iC-Haus approval in writing and precise reference to source.

iC-Haus does not warrant the accuracy, completeness or timeliness of the specification on this site and does not assume liability for any errors or omissions in the materials. The data specified is intended solely for the purpose of product description. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information/specification or the products to which information refers and no guarantee with respect to compliance to the intended use is given. In particular, this also applies to the stated possible applications or areas of applications of the product.

iC-Haus conveys no patent, copyright, mask work right or other trade mark right to this product. iC-Haus assumes no liability for any patent and/or other trade mark rights of a third party resulting from processing or handling of the product and/or any other use of the product.

As a general rule our developments, IPs, principle circuitry and range of Integrated Circuits are suitable and specifically designed for appropriate use in technical applications, such as in devices, systems and any kind of technical equipment, in so far as they do not infringe existing patent rights. In principle the range of use is limitless in a technical sense and refers to the products listed in the inventory of goods compiled for the 2008 and following export trade statistics issued annually by the Bureau of Statistics in Wiesbaden, for example, or to any product in the product catalogue published for the 2007 and following exhibitions in Hanover (Hannover-Messe).

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.