

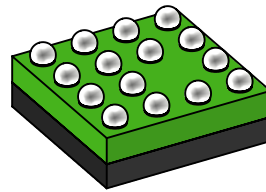
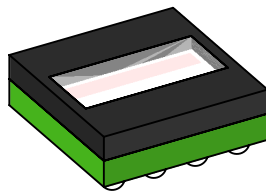
iC-LFH320 oBGA LFH1C

PACKAGE SPECIFICATION



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PACKAGE VIEW

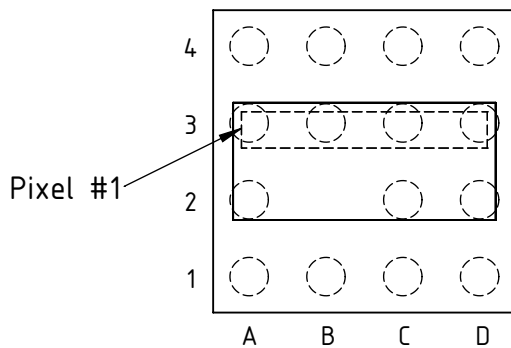


RoHS compliant

SIZE 5.0 mm x 5.0 mm

PIN CONFIGURATION

(top view)



PIN FUNCTIONS

No. Name Function

A1	RES0	Select Resolution Bit 0
A2	RES1	Select Resolution Bit 1
A3	VAO	Pixel Output Supply Voltage
A4	AO	Analog Pixel Output
B1	VDD	Digital Supply +5V
B2	n/c	
B3	n/c	
B4	VDDA	Analog Supply +5V
C1	ETP	Enable Test Mode*
C2	GND	Digital Ground
C3	GNDA	Analog Ground
C4	NRES	Power-Down Reset Output (low active)
D1	CLK	Clock
D2	SI	Start of Integration
D3	ESH	Enable Shutter
D4	BNA	Select Binning/Averaging

*ETP must be connected to GND/GNDA

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Parameter	Conditions	Min. Max.		Unit
				Min.	Max.	
G001	Ta	Operating Ambient Temperature Range	Consider self heating to stay below max. junction temperature (Tj) of iC-LFH320	-25	85	°C
G002	Ts	Storage Temperature Range		-25	110	°C
G003	Tpk	Reflow Soldering Peak Temperature	tpk < 20 s, convection reflow tpk < 20 s, vapour phase Floor life: 8h; TOL (time on label) See CUSTOMER INFORMATION #7 for details		245 230	°C °C

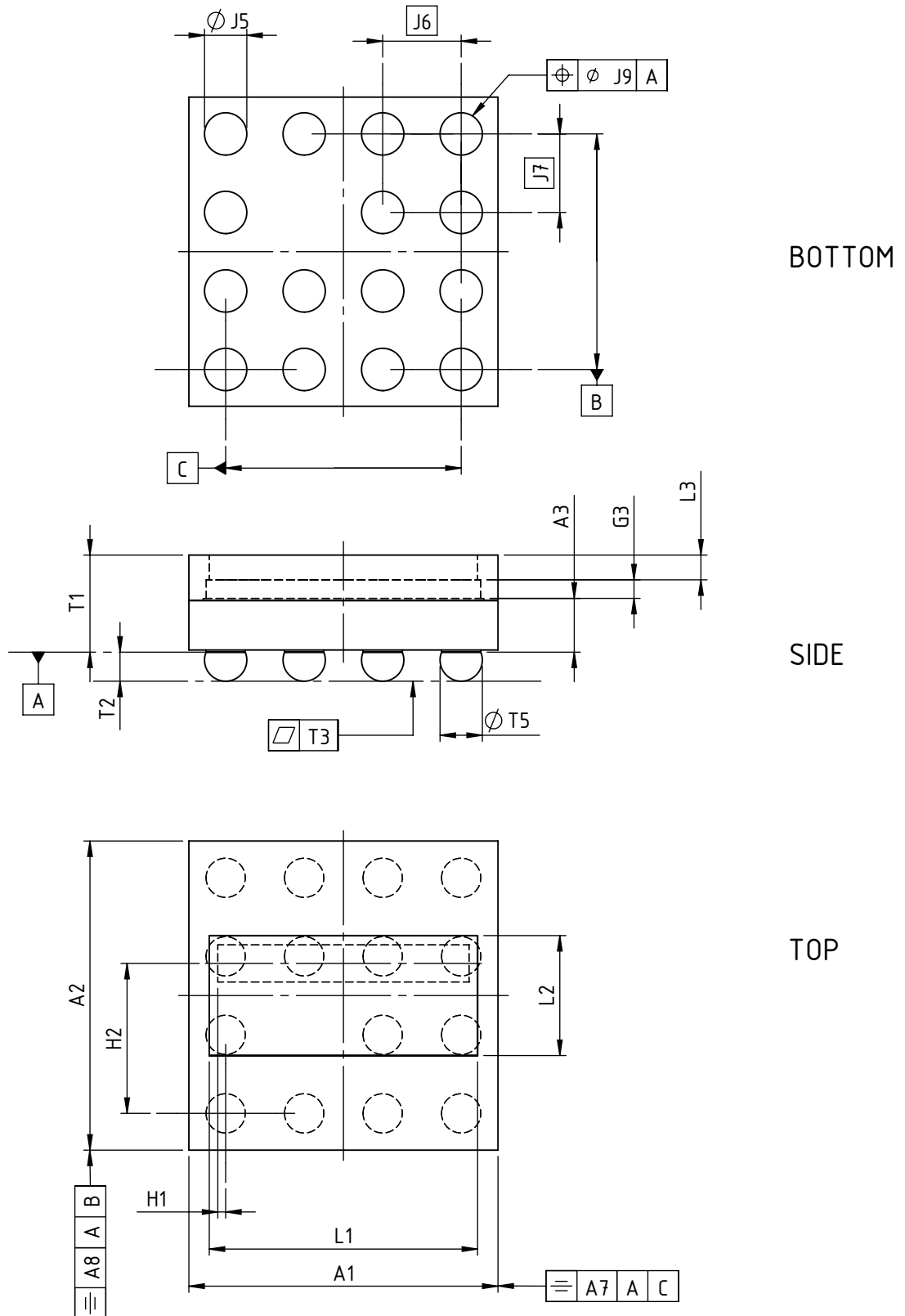
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PACKAGE SPECIFICATION



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PHYSICAL DIMENSIONS



iC-LFH320 oBGA LFH1C

PACKAGE SPECIFICATION



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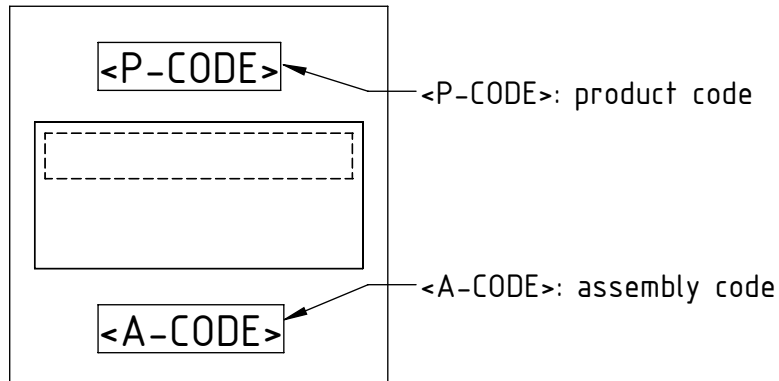
DIMENSION TABLE

Item	Parameter	Comment					Unit
			Min.	Typ.	Max.	Tol.	
Substrate							
A1	Outline X			5.00		±0.10	mm
A2	Outline Y			5.00		±0.10	mm
A3	Substrate Thickness	bottom substrate to bottom die typical value		0.90			mm
A7	Outline Symmetry X	vs. bottom metal pattern			0.20		mm
A8	Outline Symmetry Y	vs. bottom metal pattern			0.20		mm
Chip							
G3	Chip Thickness			0.30			mm
Chip Placement							
H1	Pixel Array Position vs. Bottom Metal Pattern X	bottom metal pattern vs. center of 1st pixel		0.127		±0.175	mm
H2	Pixel Array Position vs. Bottom Metal Pattern Y	bottom metal pattern vs. center of 1st pixel		2.425		±0.175	mm
Bottom Metal Pattern							
J5	Lead Diameter			0.635		±0.03	mm
J6	Lead Pitch X (or Lead to Lead Distance X)			1.27			mm
J7	Lead Pitch Y (or Lead to Lead Distance Y)			1.27			mm
J9	Lead to Lead Position Tolerance				0.10		mm
Glass Cover							
L1	Glass Size X			4.34			mm
L2	Glass Size Y			1.94			mm
L3	Glass Thickness			0.40			mm
Encapsulation							
E1	Coating Excess	surface glass to surface coating			0.05		mm
Thickness Specification							
T1	Overall Thickness	bottom substrate to top of glass (nominal glass thickness of 0.4mm) ¹⁾	1.40	1.60	1.80		mm
T2	Solder Ball Height	drawing not to scale	0.40		0.54		mm
T3	Solder Ball Planarity				0.10		mm
T5	Solder Ball Diameter			0.635			mm

Notes:

1) Coating normally adjusted to top surface of glass.

MARKING



dra_lfh1c-lfh320_0_pack_4, 10:1

Appearance of Laser marking varies by tool.

GENERAL HANDLING INSTRUCTIONS

See [CUSTOMER INFORMATION #7](#) for details.

iC-LFH320 oBGA LFH1C

PACKAGE SPECIFICATION



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REVISION HISTORY

Rel.	Rel. Date*	Chapter	Modification	Page
A1	15-07-28		Initial	

Rel.	Rel. Date*	Chapter	Modification	Page
A2	16-10-06		Update drawing PIN CONFIGURATION; update DIMENSION TABLE items H1, H2	1, 3

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* Release Date format: YYYY-MM-DD

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ORDERING INFORMATION

Type	Package	Options	Order Designation
iC-LFH320	optoBGA™ LFH1C	none	iC-LFH320 oBGA LFH1C

Please send your purchase orders to our order handling team:

Fax: +49 (0) 61 35 - 92 92 - 692

E-Mail: dispo@ichaus.com

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