	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 1 of 11
---	--	---

Revision History

Revision	Date	Item/Section	Author/Department	Changes
1.0	2022-06-02	All pages	J. Tannenbaum/SCM	Initial Release

Scope of document

This document describes the packing details for tray and tape and reel. The Moisture Sensitivity Level is also defined in the document.

It is valid for the following products which have all a QFN 3X3 package:

Inova Device ID
INLC10AQ-T
INLC10AQ-R4.5

Table of Contents

1. Tray	2
1.1 Tray Drawing	2
1.2 Packing of tray	4
1.3 Labeling of tray	5
2. Tape and Reel	6
2.1 Tape and Reel information	6
2.1.1 Carrier Tape	6
2.1.2 Reel information	7
2.1.3 Leader / Trailer	8
2.2 Packing of Reel	8
2.3 Labeling of Reel	8
2.3.1 Label Information and content	8
2.3.2 Label position	9
3. Moisture Sensitivity Level (MSL) of Device	11
3.1 Shelf Life in Sealed Bag	11
3.2 Shelf Life after Opening of Bag	11
3.3 Baking of devices	11

1. Tray

Manufacturer Partnumber: INLC10AQ-T

Tray content: 490 QFN16 3x3 devices

1.1 Tray Drawing

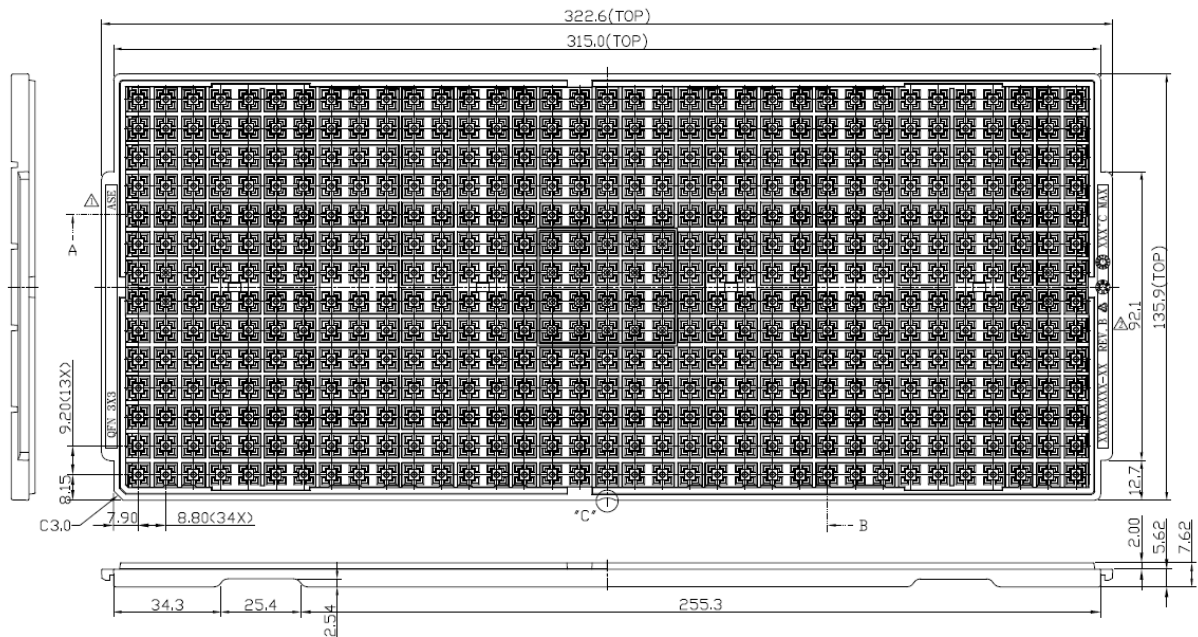


Figure 1 Outer dimension of tray

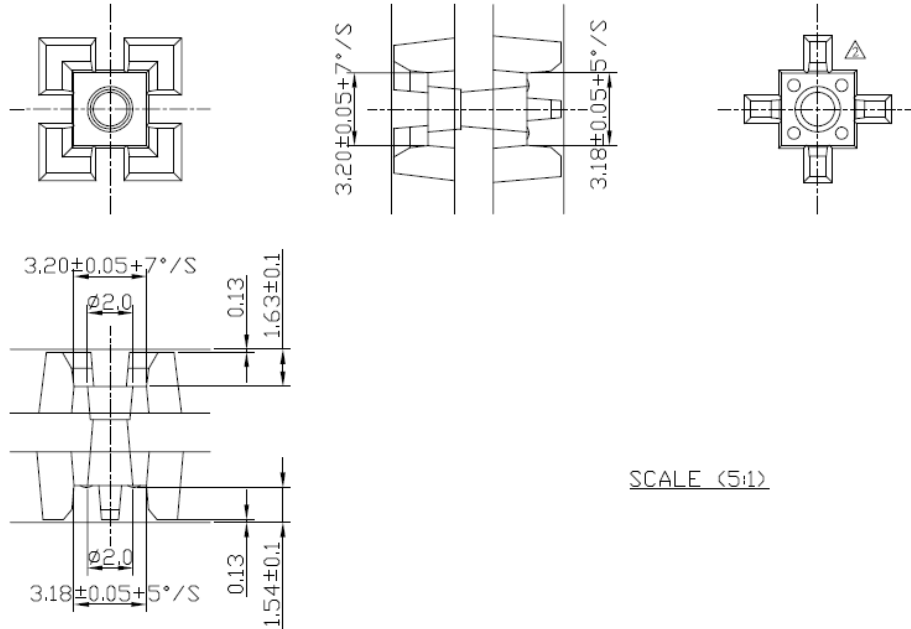


Figure 2 Dimensions of tray cup

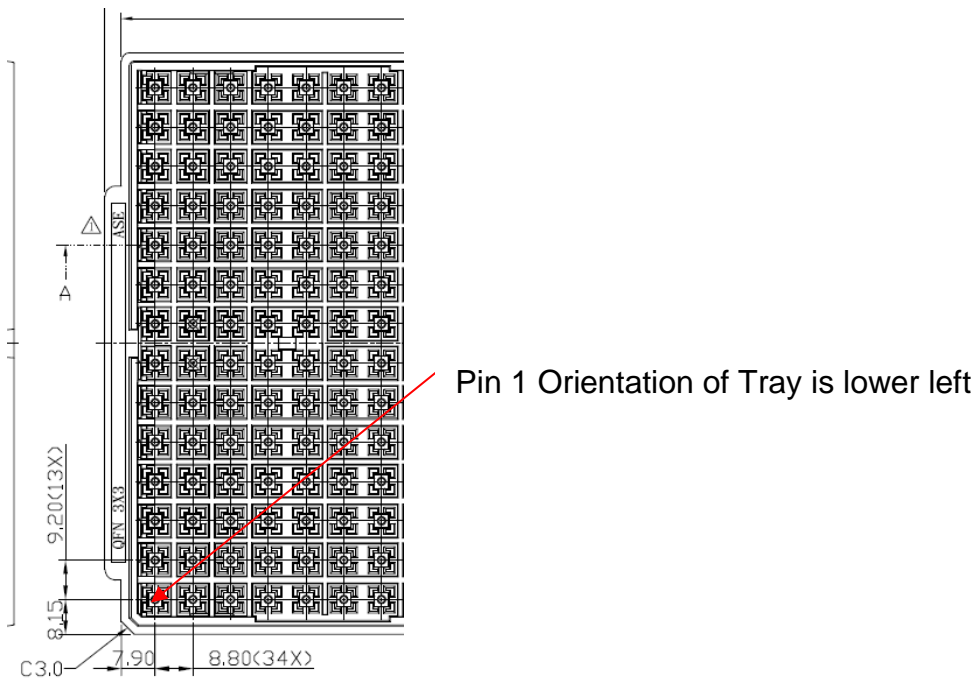



Figure 3 Pin 1 orientation of tray

The warpage of the tray is < 0.76mm

	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 4 of 11
---	--	---

1.2 Packing of tray


The parts and the trays are baked and dry sealed. MSL is 3.

Tray and packing material are antistatic material. A desiccant and humidity indicator are packed in the Moisture Barrier Bag (MBB). The tray is heat resistant up to 125°C and the Bag Seal Date is mentioned on the MBB.

The quantity of single tray is marked with “-T” at the Inova Part-No. The sales quantity of each tray is 490 pieces. Packing includes one tray and one cover tray sealed in MBB.



Figure 4 ESD protective MBB for a single tray

	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 5 of 11
---	--	---

1.3 Labeling of tray

Inova Standard label is nonspecific. The code using is "Barcode 128". Dimensions of label are 105 mm x 51 mm. The label is pasted on each MBB and includes the following information:

Table 1 Inova Standard Label

Data identifier	Description	Content / Example	Barcode
(1P)	Inova Part No.	Main product number: e.g. "INLC10AQ-R4.5"	✓
(1T)	Inova Lot-No.	Batch number (Lot#): e.g. "7IVU20379.000"	✓
(9D)	Date Code	Date Code (Abbreviation on the Order: DC): e.g. "2016"	✓
(Q)	Quantity	Content of one packing unit: 490 pcs.	✓
(1C)	Lot no. (supplier)	Individual production lot Number from supplier	(✓)
(14D)	Expiration Date	<i>Leave this field empty for trays</i>	✓
(16D)	Manufacturing Date	Shrink-wrap date of Bag Seal: layout: YYYYMMDD	✓
---	Picture1	Inova Logo (fix)	---
---	Picture2	"bleifrei"/"leadfree" (fix)	---
---	Picture3	"MSL3" (fix)	---

Data identifier and description are not variable.

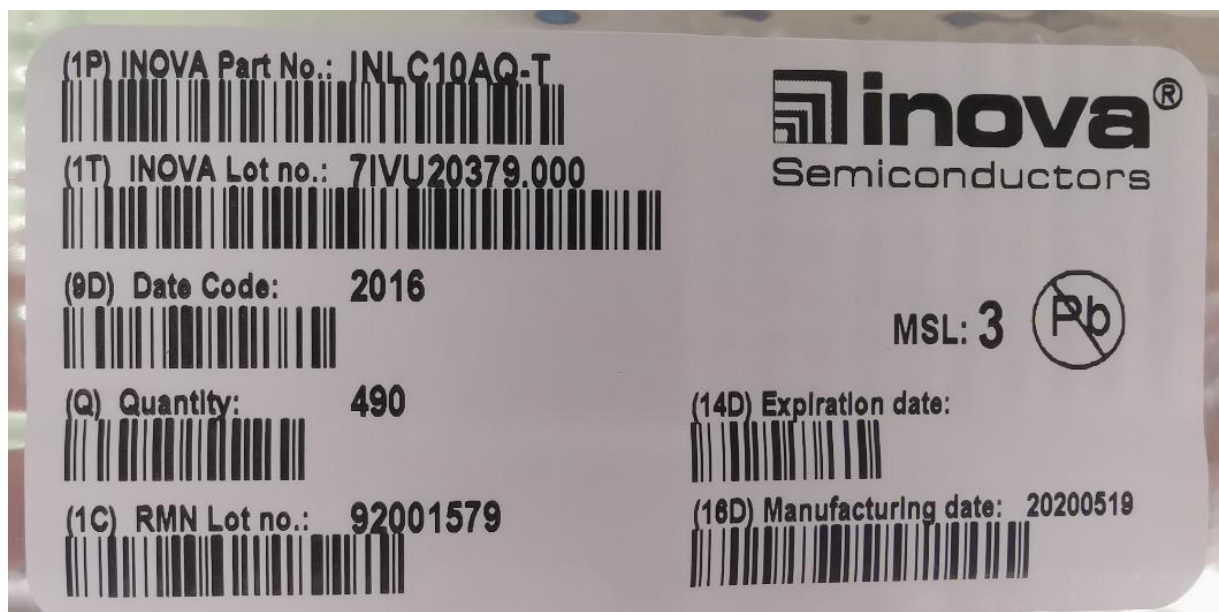


Figure 5 Label of a single tray (INLC10AQ-T)

2. Tape and Reel

Manufacturer Partnumber: INLC10AQ-R4.5

Reel Size [mm] = 13 - 0.2/+0.5

Reel content: 4500 QFN16 3x3 devices

2.1 Tape and Reel information

2.1.1 Carrier Tape

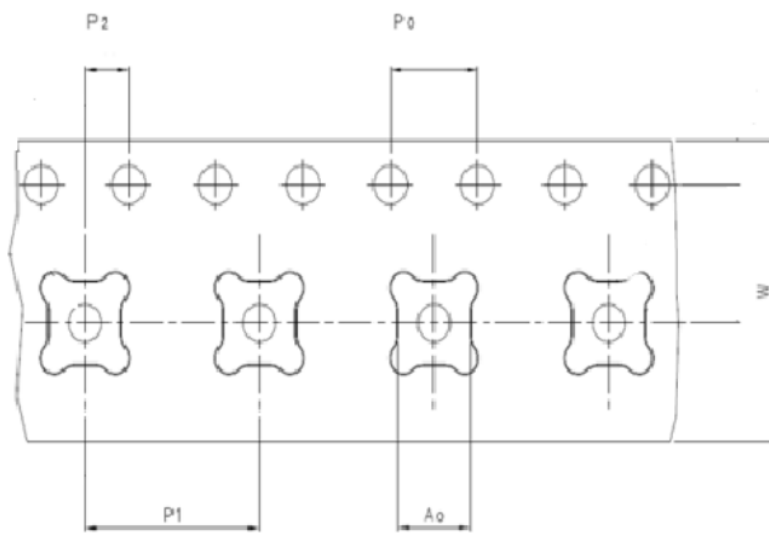


Figure 6 Carrier tape drawing

Table 2 Carrier tape dimensions

	Dimensions in mm
P0	4.0+/-0.2
P1	8+/-0.1
P2	2.0+/-0.05
W	12+0.3
A0	according DIN EN 60286-3:2019-08

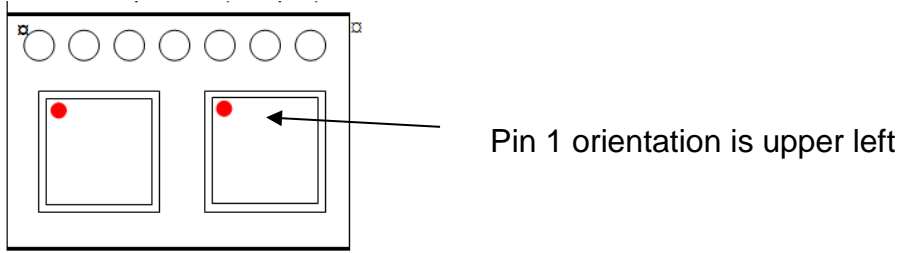


Figure 7 Pin 1 orientation in reel

2.1.2 Reel information

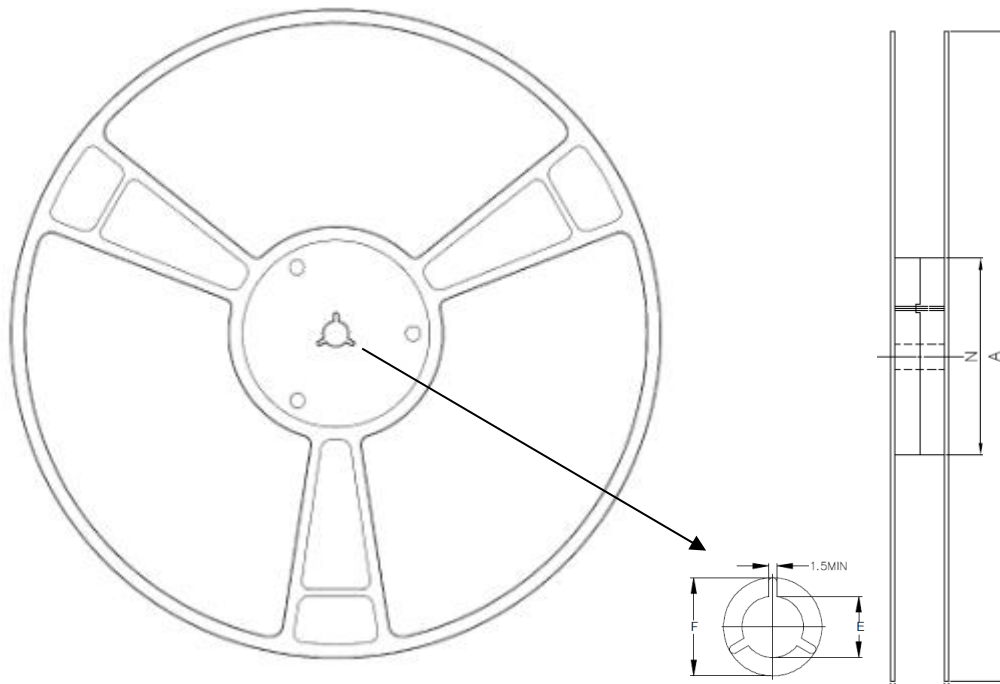



Figure 8 Reel drawing

Table 3 Reel dimension detailed

Tape Width mm	Reel Diameter A mm	HUB Diameter N mm	Arbor Hole F in mm	Arbor Hole E in mm
12	330 +/- 2.0	100 +/- 2.0	20.0 min	13.0 +0.5 / -0.2

	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 8 of 11
---	--	---

2.1.3 Leader / Trailer

- There is a leader of 400mm. The whole leader consists of empty compartments covered by tape
- There is a trailer of 400mm. The whole trailer consists of empty compartments covered by tape.

2.2 Packing of Reel

The content quantity of a reel for INLC10AQ always is 4500 parts. The reel has an own article number which ends with –R4.5 in the Inova part number (one reel with 4500 parts). A maximum of 2 different wafer lots and date codes is allowed. If one reel contains 2 different lot numbers and date codes, 2 labels are pasted on it.

Reel and packing material are of anti-static material. Packing also contains desiccant and humidity indicator card.


2.3 Labeling of Reel

2.3.1 Label Information and content

Inova Standard label is nonspecific. The code using is “Barcode 128”. Each label includes the following information:

Table 4 Inova Standard Label

Data identifier	Description	Content / Example	Barcode
(1P)	Inova Part No.	Main product number: e.g. "INLC10AQ-R4.5"	✓
(1T)	Inova Lot-No.	Batch number (Lot#): e.g. "7IVP32617.000"	✓
(9D)	Date Code	Date Code (Abbreviation on the Order: DC): e.g. "1923"	✓
(Q)	Quantity	Content of one packing unit	✓
(1C)	Lot no. (supplier)	Individual production lot Number from supplier	(✓)
(14D)	Expiration Date	Expiration Date of MSL3 Packaging	✓
(16D)	Manufacturing Date	Shrink-wrap date of Bag Seal: layout: YYYYMMDD	✓
---	Picture1	Inova Logo (fix)	---
---	Picture2	"bleifrei"/"leadfree" (fix)	---
---	Picture3	"MSL3" (fix)	---

	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 9 of 11
---	--	---

Data identifier and description are not variable.



Figure 9 Inova Label of reel, MBB and cardboard (barcode 128)

2.3.2 Label position

The Inova Standard Label is placed on each reel, MBB and cardboard. In case of 2 different production lots, 2 different labels for mother and child lot are pasted on reel, MBB and cardboard.



Figure 10 Label on reel



	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 10 of 11
---	--	--



Figure 11 Label on MBB



Figure 12 Label on cardboard

	Customer Packing Specification INLC10AQ	Document: Q_packing_specification_ISEL ED_QFN3x3_customer.docx Date: 2022-06-02 Page: 11 of 11
---	--	--

3. Moisture Sensitivity Level (MSL) of Device

The moisture sensitivity level of the devices is as following:

Table 5 Overview of Moisture Sensitivity Level

Device ID	MSL
INLC10AQ-T	3
INLC10AQ-R4.5	3

3.1 Shelf Life in Sealed Bag

The shelf life of devices in sealed bags is 12 months when stored at <40°C and <90% RH.

3.2 Shelf Life after Opening of Bag

The shelf life after opening the sealed bag is 168 hours at <30°C and 60% RH

3.3 Baking of devices

The devices need to be baked when

- The humidity indicator is $\geq 10\%$ at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$
- The shelf life after opening the sealed bag has expired

If bake is required, refer to IPC/JEDEC J-STD-033 for bake procedure in general.

For this device the maximum bake temperature and the bake time is:

- Tray: 125°C - 8 hours
- Reel: 40°C – 8 days