

Packing and Order Information

General Information

Vishay offers LEDs and 7 Segment Displays with several packing options.

Device	Series	Bulk	Tape	Blister Tape	Tube
7 Segment Display	TD..				X
TELUX	TLW.				X
SMD	TLM.			X	
Pin Hole LED	TL..	X	X		

All Packing options are classified in terms of brightness (standard), color (optional) or forward voltage (optional). Reference for Parameter Selection

Codes is the chapter "Classification of Components", label code is SEL.

Barcode Label Format

Type

- PTC – Assembly Location Code
- SEL – Parameter Selection Code**
- DC – Date Code
- BN – Batch Number
- PCS – Quantity**
- MN – Machine number

Drypacks

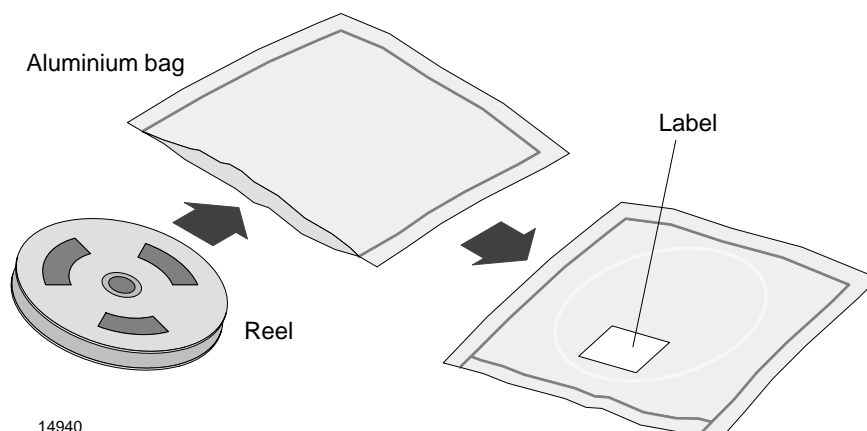
Blister tapes are packed in anti-humidity aluminium bags to prevent the products from moisture absorption during transportation and storage. Each bag contains a desiccant with moisture indicators. In cases of moisture absorption, the indicators change their color from blue to pink.

Dry box storage is recommended to prevent the parts from moisture absorption. The following conditions should be preserved if dry boxes are not available.

Storage condition max. 1 year: Temperature: 10 to 30°C Humidity: 60% RH max
 unlimited: Temperature: 10 to 30°C Humidity: 20% RH max

In case of moisture absorption the device will recover to the former condition by drying under the following recommended conditions:

192 hours at 40°C + 5°C and < 5% RH.



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Fan Fold Packing

Fan fold box is the standard containment for Reel, Tube and Bulk. Label Format is identically with packing options as described above. Packing might contain tubes or reels with several Parameter Selection Codes. In this case the label code of Fan Fold Packing is SEL000.

Exception: TELUX fan fold boxes contain one SEL code only.

Minimum Order Quantity

Packing Options describe the small physical packing unit. Vishay Sales representatives can provide information on the Minimum Order Quantity per type.

Number of Components

Quantity (bulk): 3mm: 5000 pcs
5mm: 4000 pcs

Quantity per reel: 3 mm: 2000 pcs
5 mm: 1000 pcs

Quantity per ammpack: 3 mm: 2000 pcs
5 mm: 1000 pcs

Order Codes

The type designation of the device is extended by tape option codes.

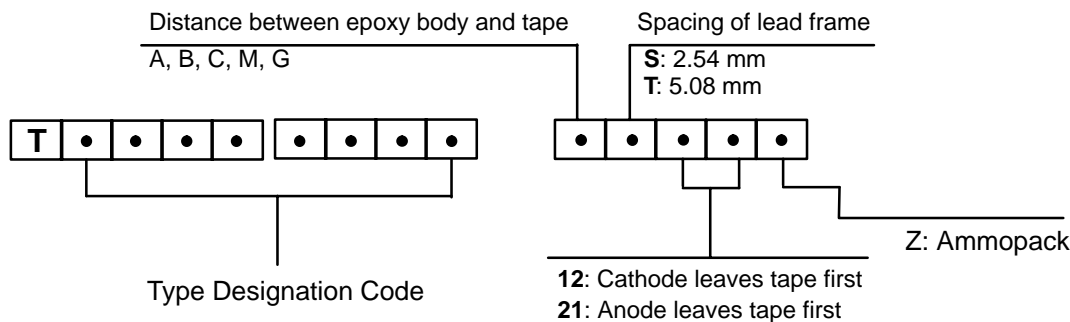


Figure 1. Taping code

Example: TLME3100 GS08
TLHE4200 AS21
TLHE4200 AS12Z
optional since 1999:
TLHE4200 ASZ

Missing Components

Up to 3 consecutive components may be missing if the gap is followed by at least 6 components. A maximum of 0.5% of the components per reel quantity may be missing. At least 5 empty positions are present at the start and the end of the tape to enable tape insertion.

Tensile strength of the tape: ≥ 15 N

Pulling force in the plane of the tape, at right angles to the reel: ≥ 5 N

Note:

Shipment in fan-fold packages are standard for radial taped devices.

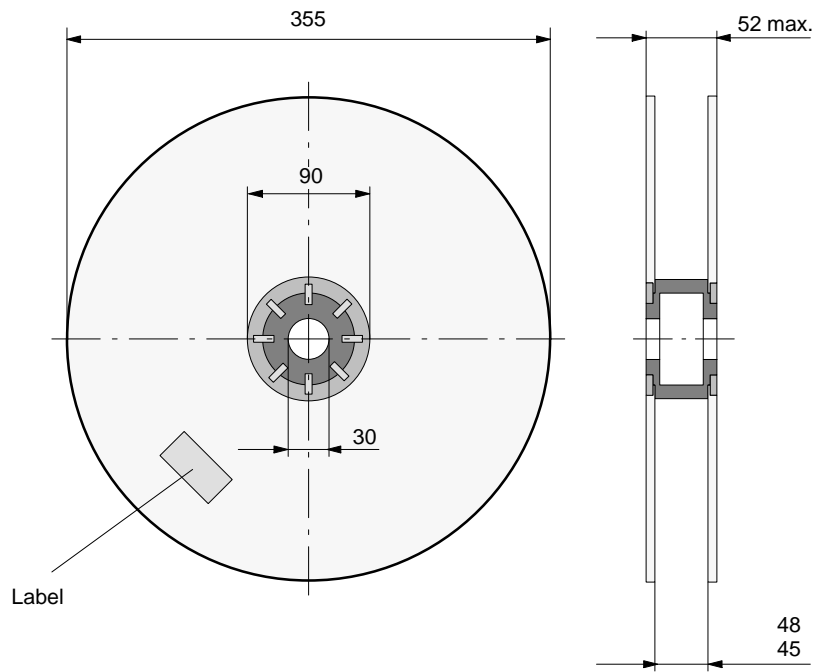
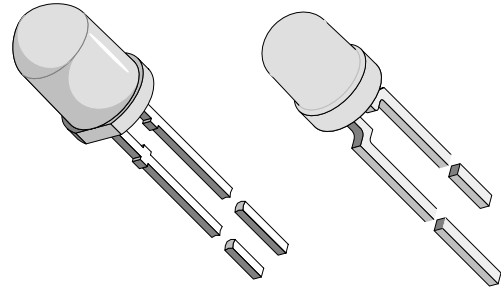
Shipments in reel packing are only possible if the customer guarantees the removal of empty reels.

According to a German packaging decree (Verpackungsverordnung) we are not able to accept the return of reels.

Specification of Packing Options

Pin Hole LED (TL.. – series)

Reel



94 8641

Figure 2. Reel dimensions

Tape

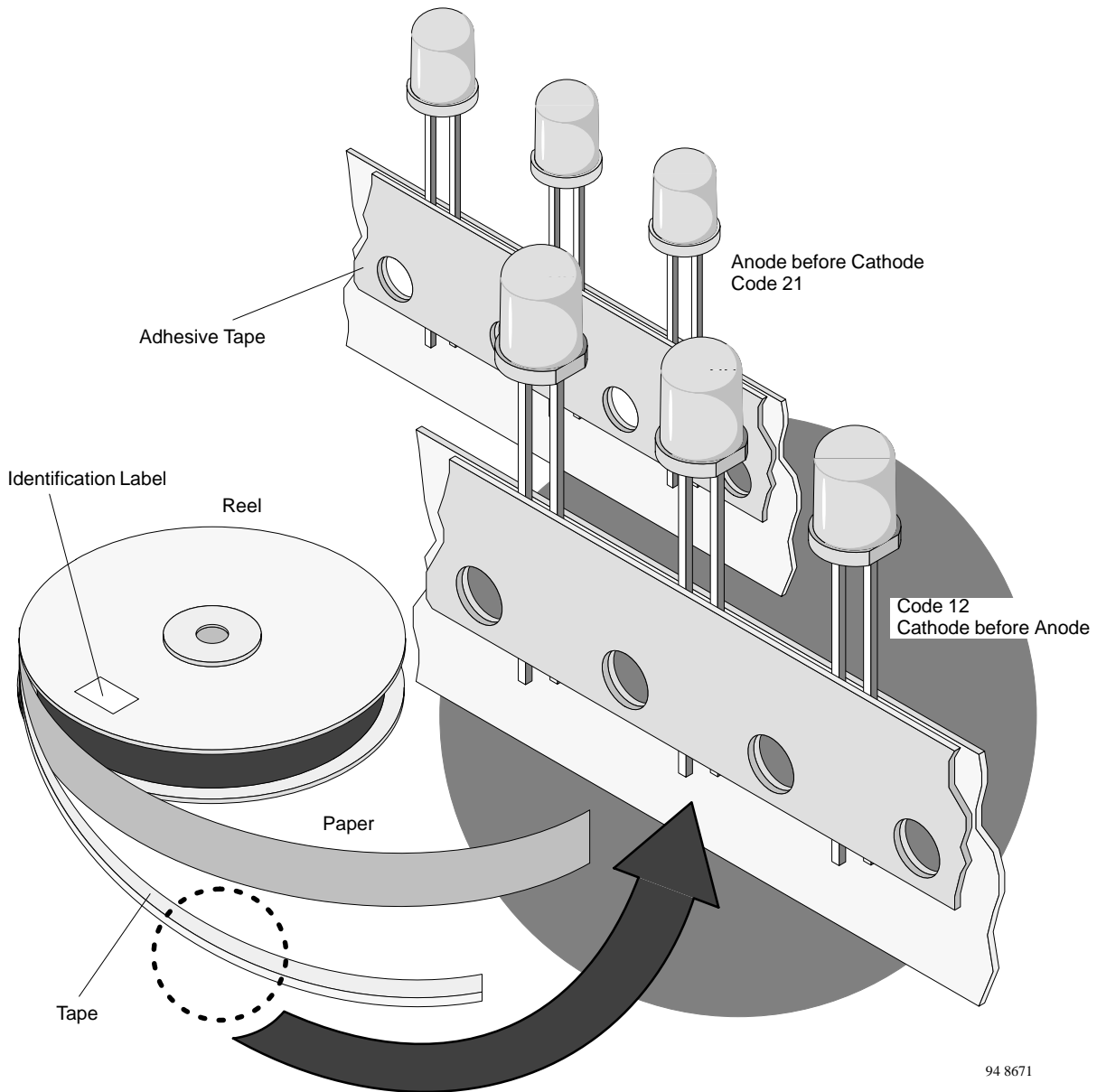


Figure 3. LED in tape

Ammopack

The tape is folded in concertina arrangement and laid in the cardboard box.

If the components are required with the cathode before the anode (figure 4), the start of the tape should be

taken from the side of the box marked “-”. If the components are required with the anode before cathode (figure 7), the tape should be taken from the side of the box marked “+”.

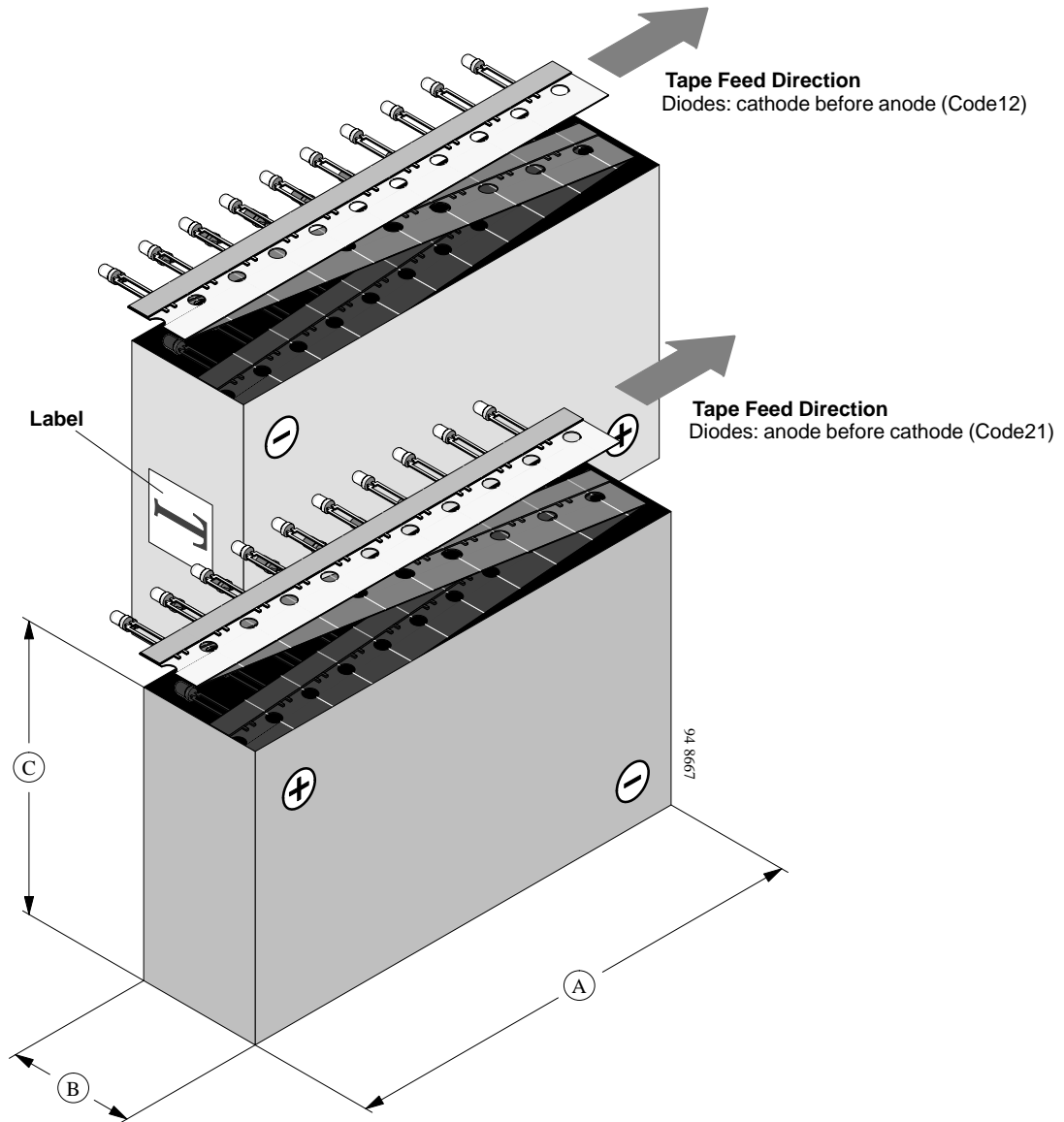


Figure 4. Tape direction

Table 1. Inner dimensions

A	B	C	Packages
340	46	125	Ø5 mm
340	34	140	Ø3 mm AS-Taping
340	41	140	Ø3 mm other than AS-Taping

Options

Tape Dimensions for \varnothing 3 mm Standard Packages

Available Package Variations: 12, 12Z, 21

Table 2. Tape variations (3 mm standard)

LED Series	
TLH. 4...	AS, MS, BT
TLL. 4...	AS, MS, BT
TLS. 21..	AS
TLU. 24..	AS
TLUR.4...	AS, MS, BT
TLD. 4...	AS, MS, BT
TLV. 4...	AS, MS, BT

Table 3.

Option	x \pm 0.5mm	Preference
AS	17.3	standard
MS	25.5	standard
CS	22.0	
KS	19.3	
LS	21.0	
BT	20.0	
MT	25.5	

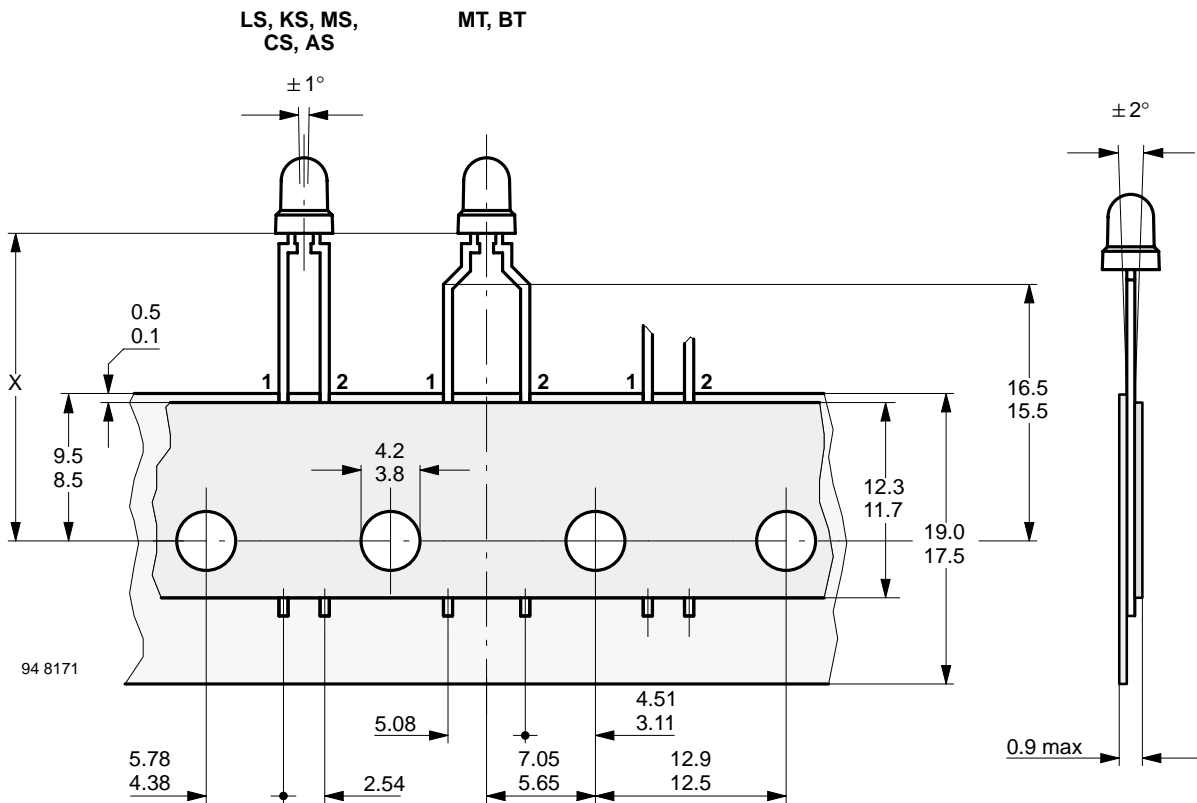


Figure 5. Tape dimensions \varnothing 3mm devices

Tape Dimensions for \varnothing 5 mm Standard Packages
Available Package Variations: 12, 12Z, 21

Table 4. Tape variations (5 mm standard)

LED Series	
TLH. 5...	AS, BT, MT
TLL. 5...	AS, BT, MT
TLS. 5..	AS
TLUR. 5...	AS, BT, MT
TLD. 5...	AS, BT, MT
TLUR6..	BT, CS
TLH.6	BT, CS

Table 5.

Option	x \pm 0.5mm	Preference
AS	19.7	standard
MS	25.5	
CS	22.0	standard
KS	21.7	
BT	20.0	
MT	25.5	

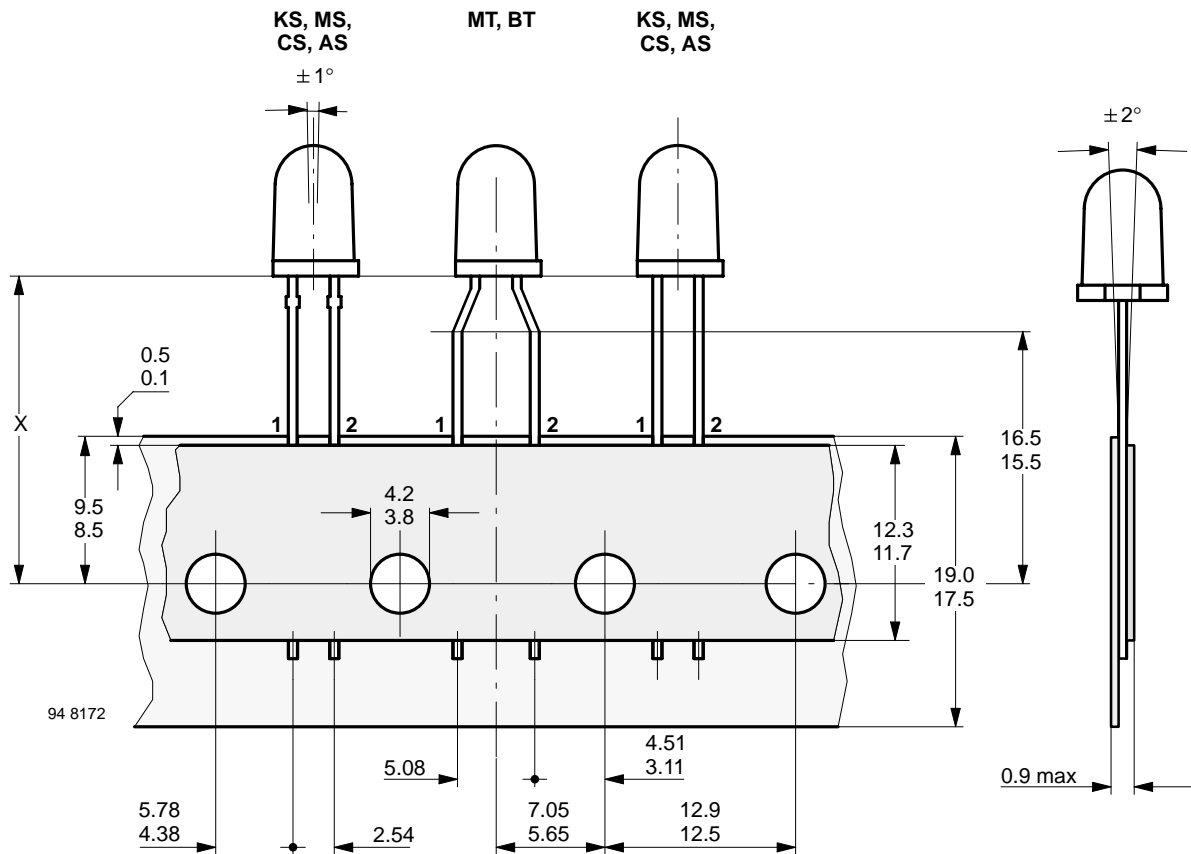
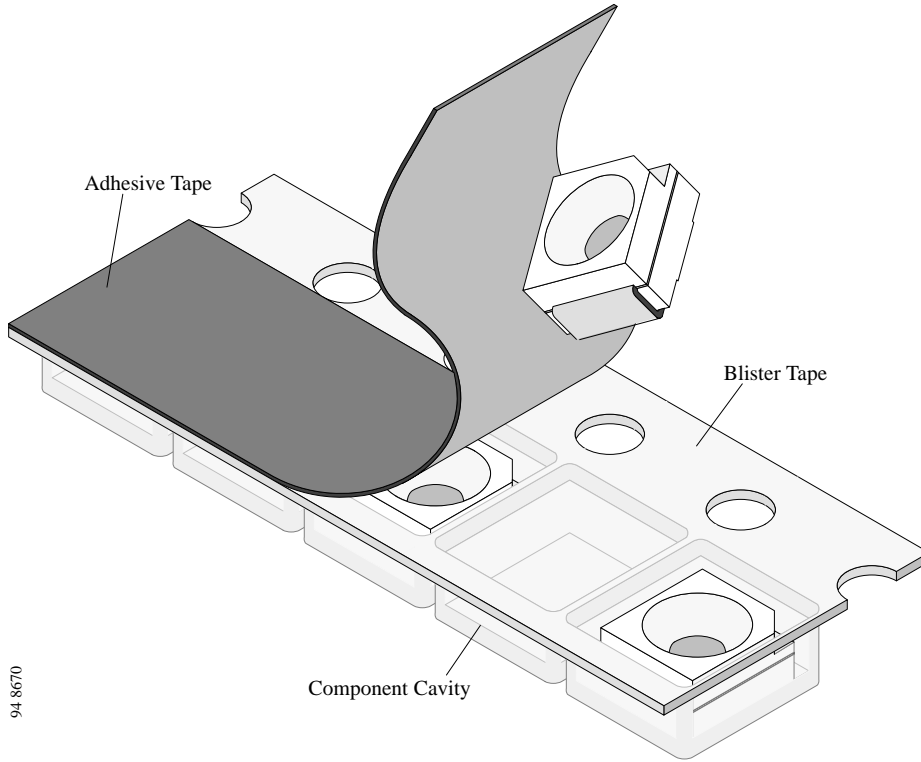


Figure 6. Tape dimensions \varnothing 5 mm devices

SMD LED (TLM. – series)

Vishay's LEDs in SMD packages are available in an antistatic 8 mm blister tape (in accordance with DIN IEC 40 (CO) 564) for automatic component

insertion. The blister tape is a plastic strip with impressed component cavities, covered by a top tape.



Taping of TLM.31..

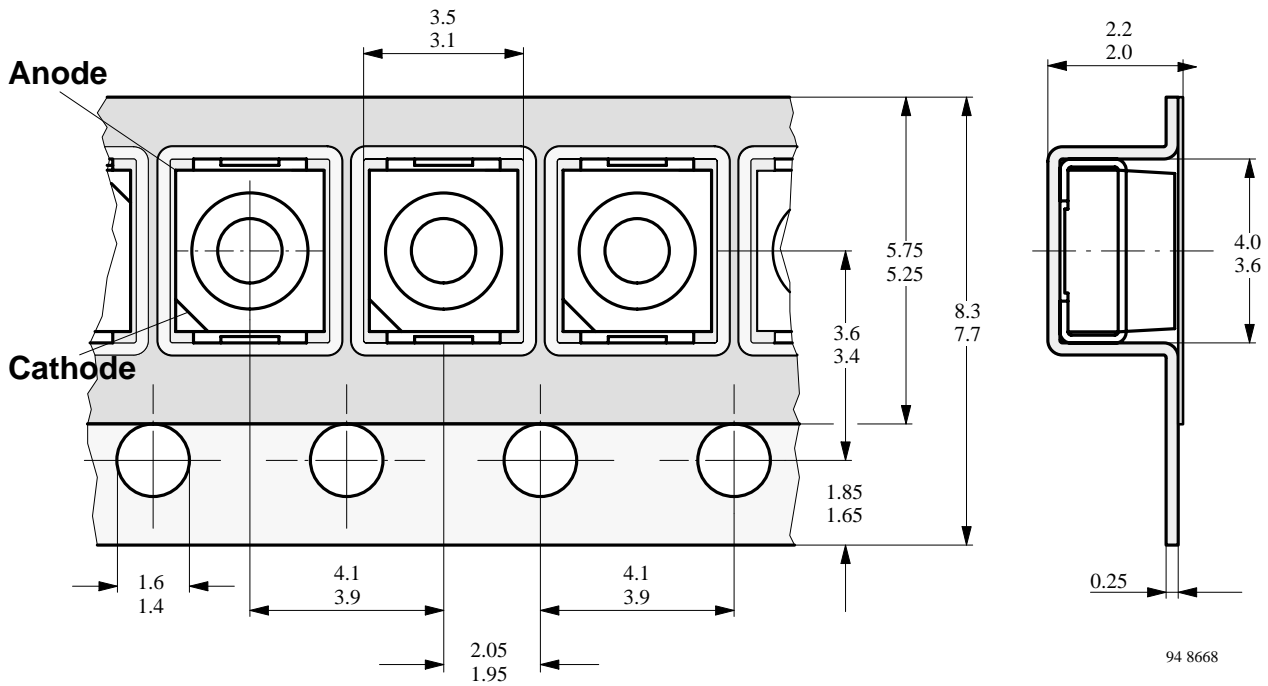


Figure 7. Tape dimensions in mm for PLCC2

Taping of TLMD3100

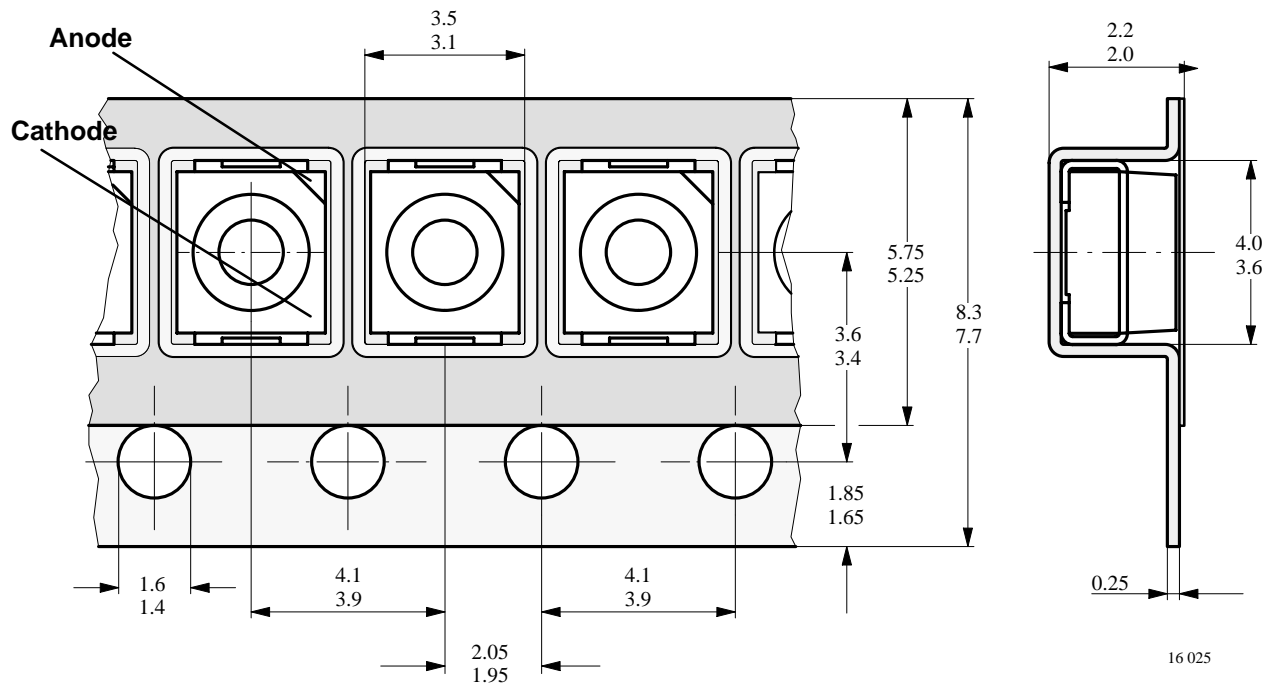


Figure 8. Tape dimensions in mm for PLCC2

Number of Components TLM. – series

Quantity per reel in	GS08	1500 pcs
	GS18	8000 pcs

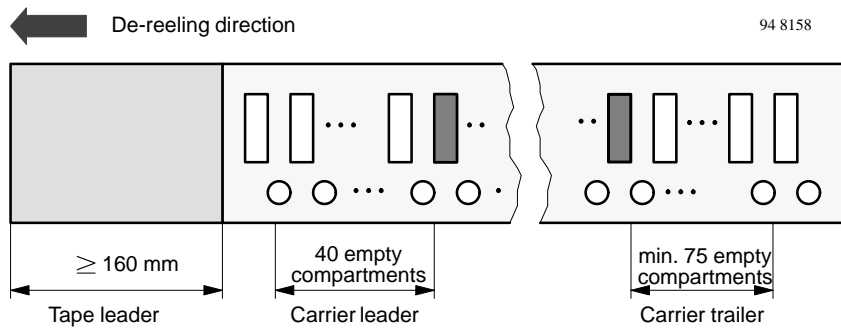


Figure 9. Beginning and end of reel

Reel Package dimension in mm for SMD LEDs, tape option GS08 (=1500 pcs.)

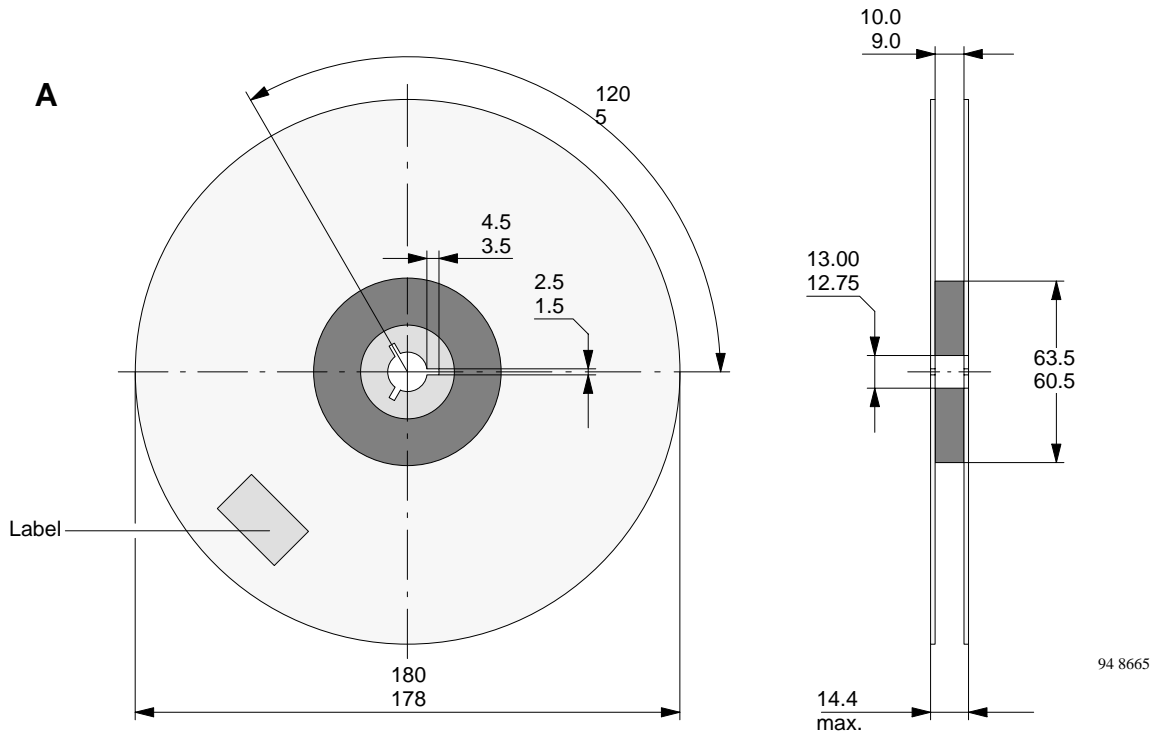


Figure 10. Reel dimensions –GS08

Reel Package dimension in mm for SMD LEDs, tape option GS18 (= 8000 pcs.) preferred

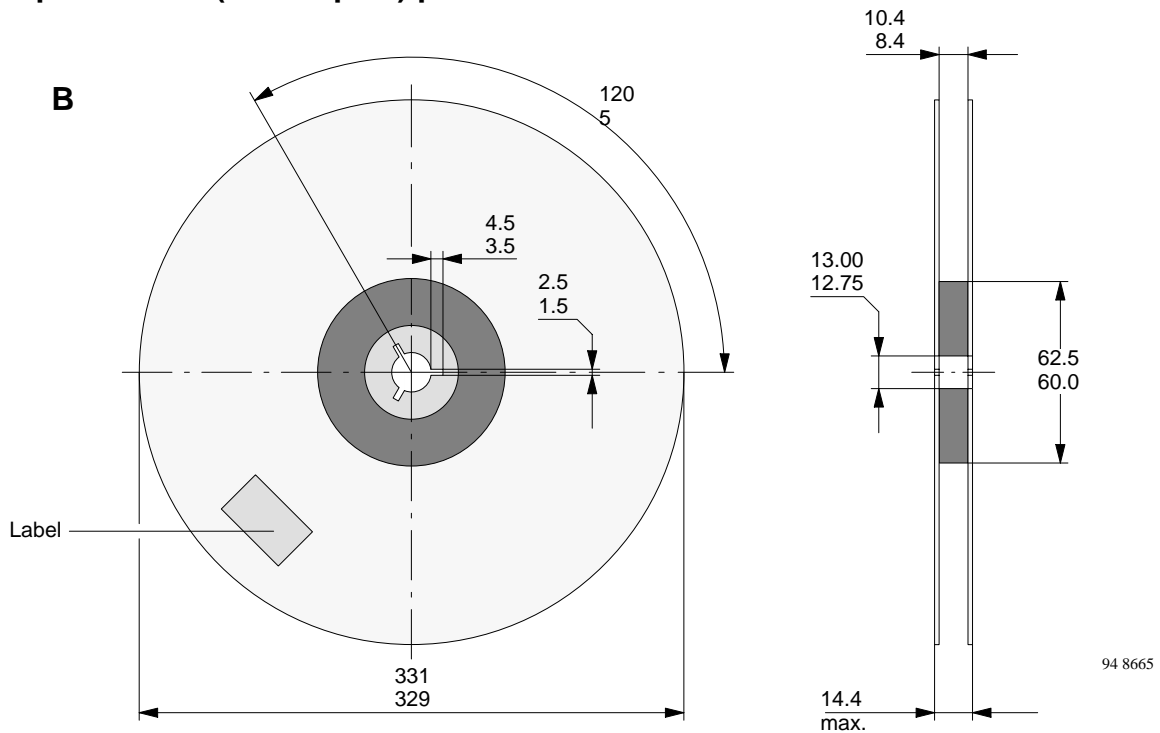


Figure 11. Reel dimensions –GS18

Missing Devices

A maximum of 0.5% of the total number of components per reel may be missing, excluding missing components at the beginning and at the end of the reel. A maximum of three consecutive components may be missing, provided this gap is followed by six consecutive components.

The tape leader is at least 160 mm and is followed by a carrier tape leader with at least 40 empty compartments. The tape leader may include the carrier tape as long as the cover tape is not connected to the carrier tape.

The last component is followed by a carrier tape trailer with at least 75 empty compartments and sealed with cover tape.

Top Tape Removal Force

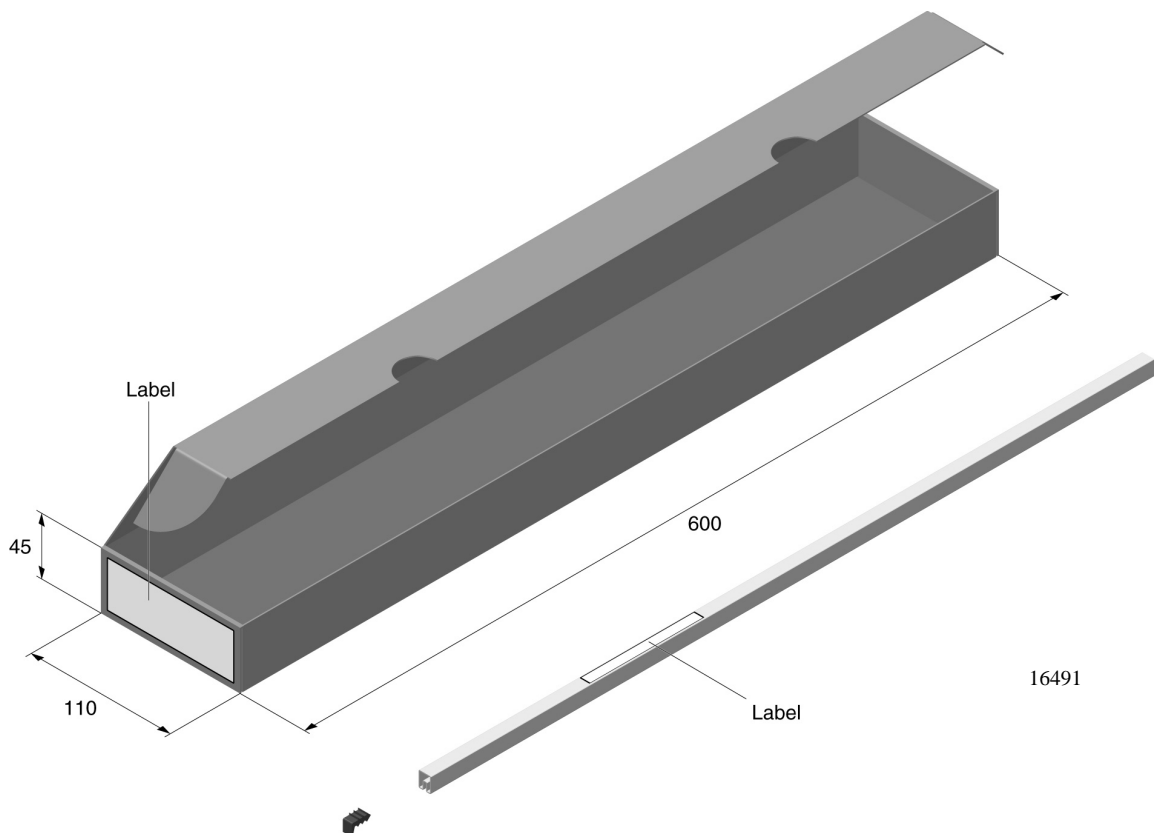
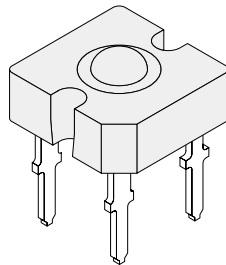
The removal force lies between 0.1 N and 1.0 N at a removal speed of 5 mm/s.

In order to prevent components from popping out of the blisters, the cover tape must be pulled off at an angle of 180°C with regard to the feed direction.

Order Codes

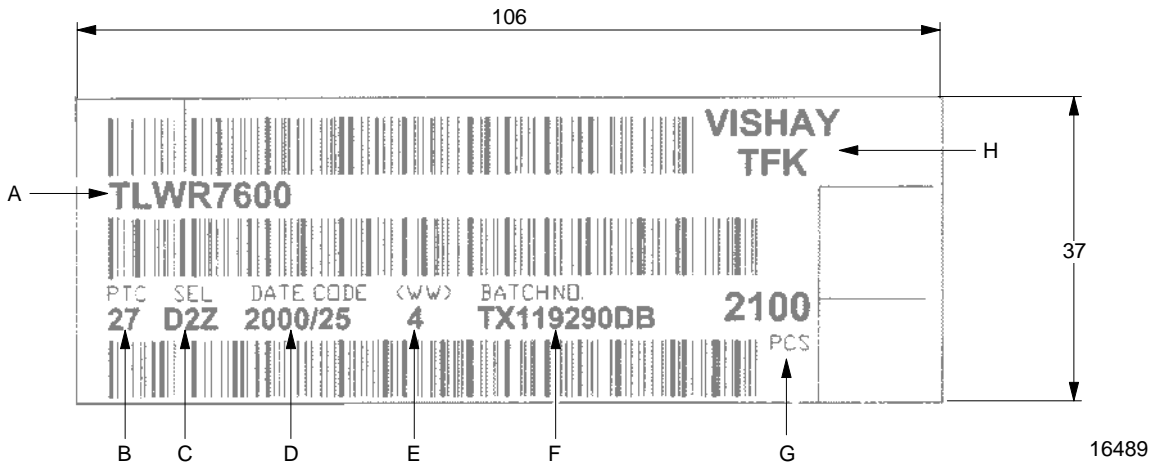
Example: TLMB3100–GS08

TELUX™ Fan Fold Box



Vishay Telefunken

Label of Fan Fold Box



- A) Type of component
- B) Manufacturing plant
- C) SEL – Selection code (Bin)
Digit1 – code for Luminous Flux group
Digit2 – code for Dominant Wavelength group
Digit3 – code for Forward Voltage group
- D) Date code
- E) Week code
- F) Batch No.
- G) Total quantity
- H) Company code

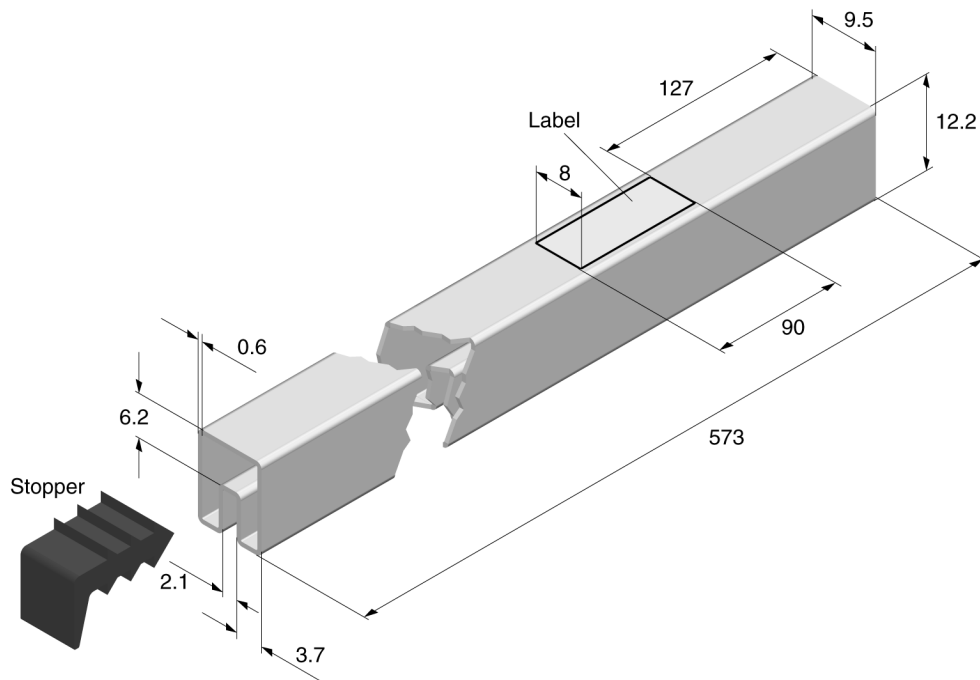
Note: Any distance between bar code and character is more than 1mm.

Example for TELUX tube label



- A) Bar code
- B) Type of component
- C) Manufacturing plant
- D) SEL – Selection code (Bin)
 - Digit1 – code for Luminous Flux group
 - Digit2 – code for Dominant Wavelength group
 - Digit3 – code for Forward Voltage group
- E) Date code
- F) Batch No.
- G) Total quantity
- H) Company code

Tube with Bar code label



Drawing proportions not scaled