Vishay Semiconductor SMD IR Receivers are packaged on tape and reel. The following specification is based on IEC publication 286, which takes the industrial requirements for automatic insertion into account.

Absolute maximum ratings, mechanical dimensions, optical and electrical characteristics for taped devices are identical to the basic catalog types and can be found in the specifications for untaped devices.

PACKAGING
The tapes of components are available on reels. Each reel is marked with labels which contain the following information:
- Vishay
- Type
- Group
  - Tape code, normally part of type name
- Production code
- Quantity

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

NUMBER OF COMPONENTS
A. Panhead SMD: quantity per reel:
   TT, SMD top view package, 1190 pcs
   TR, SMD side view package, 1120 pcs
B. Heimdall: quantity per reel:
   TT, Heimdall top view package, 2200 pcs
   TR, Heimdall side view package, 2300 pcs
C. Heimdall without lens: quantity per reel:
   WTT, top view package, 2200 pcs
   WTR, side view package, 2300 pcs
D. Bugeye: quantity per reel:
   TT, 2500 pcs
   TR, 2500 pcs
E. AP5: quantity per reel:
   TT, 2500 pcs
   TR, not available in side view
F. Belobog: quantity per reel:
   TT1, 1800 pcs
   TT2, 7000 pcs
   TR, not available in side view
G. Belobog with shield: quantity per reel:
   TT1, 1500 pcs
   TT2, 5000 pcs

ORDER DESIGNATION
The type designation of the device is extended by TT or TT1 for top view or TR for side view.

**Example:**
- TSOP6238TR (reel packing)
- TSOP75238TR (reel packing)
- TSOP75338WTT (reel packing)
- TSOP85438TT (reel packing)
- TSOP85238AP5TR (reel packing)
- TSOP57438TT1 (reel packing)
- TSOP57238HTT1 (reel packing)
REEL DIMENSIONS FOR PANHEAD SMD AND HEIMDALL in millimeters

Form of the reel open of the wheel is supplier specific.

Dimension acc. to IEC EN 60 286-3

Tape width 15

Reel hub 2:1

Note
- The body structure of the reel can vary
Taping Version TSOP..TT (Top View) Dimensions in millimeters

A. Panhead SMD (TSOP36...TT, TSOP35...TT, TSOP6...TT)
TAPING VERSION TSOP..TT (TOP VIEW) DIMENSIONS in millimeters

B. Heimdall SMD (TSOP75...TT, TSOP77...TT)

Drawing-No.: 9.700-5338.01-4
Issue: 3; 09.06.09
21578

technical drawings according to DIN specifications
TAPING VERSION TSOP..TT (TOP VIEW) DIMENSIONS in millimeters

C. Heimdall SMD without lens (TSOP75...WTT, TSOP77...WTT)

Drawing-No.: 9.700-5341.01-4
Issue: 2: 23.03.09
21666
TAPING VERSION TSOP..TT (TOP VIEW) DIMENSIONS in millimeters

D. Bugeye (TSOP85...TT)
TAPPING VERSION TSOP..TT (TOP VIEW) DIMENSIONS in millimeters
E. AP5 (TSOP85...AP5TT)

Drawing-No.: 9.700-5346.01-4
Issue: 2, 24.11.09
21945

for device orientation only

optical center

Direction of feed

technical drawings according to DIN specifications
TAPPING VERSION TSOP..TT1, TSOP..TT2 (TOP VIEW) DIMENSIONS in millimeters

F. Belobog (TSOP37...TT1, TSOP37...TT2, TSOP57...TT1, TSOP57...TT2)

Tape and reel dimensions:

Unreel direction

Tape position coming out from reel

Unreel direction

Label posted here

Parts mounted

Empty leader 400 mm min.

Empty trailer 200 mm min.

Direction of pulling out

100 mm min. with cover tape

Leader and trailer tape:
Empty trailer 200 mm min.

Reel size “Y”

TT1 Ø 180 ± 2 = 1800 pcs.
TT2 Ø 330 ± 2 = 7000 pcs.

Ø 21 ± 0.8

Ø 13 ± 0.2

18.4 max.

(2.2)

(4.5)

(8.0)

(2.0)

(1.5)

(0.3)

(1.2)

(3.0)

(5.5)

12 ± 0.3

X 2:1

Technical drawings according to DIN specifications

Drawing-No.: 9.700-5347.01-4

Not indicated tolerances ± 0.1

Issue: 1; 14.11.11
Taping Version TSOP..TT1, TSOP..TT2 (Top View) Dimensions in millimeters
G. Belobog with shield (TSOP37...HTT1, TSOP37...HTT2, TSOP57...HTT1, TSOP57...HTT2)

Tape and Reel dimensions:

Reel size "Y"
GS 08 Ø 180 ± 2 = 1500 pcs.
GS 18 Ø 330 ± 2 = 5000 pcs.

Unreel direction

Tape position coming out from reel

Not indicated tolerances ± 0.1

Ø 21 ± 0.8

Label posted here

Ø 13 ± 0.2

Parts mounted

Empty leader 400 mm min.

100 mm min. with cover tape

Leader and trailer tape:
Empty trailer 200 mm min.

Direction of pulling out

X 2 : 1

Reel dimensions and tape

Drawing-No.: 9.700-5380.01-4
Issue: 1; 28.10.13
TAPING VERSION TSOP..TR (SIDE VIEW) DIMENSIONS in millimeters

A. Panhead SMD (TSOP36...TR, TSOP35...TR, TSOP6...TR)

Drawing-No.: 9700-5260.01-4
Issue: 2; 25.09.01

16585
TAPING VERSION TSOP..TR (SIDE VIEW) DIMENSIONS in millimeters

B. Heimdall SMD (TSOP75..., TSOP77...)

Drawing-No.: 9.700-5337.01-4
Issue: 1; 16.10.08
21577
Taping Version TSOP..TR (Side View) Dimensions

C. Heimdall SMD without lens (TSOP75...WTR, TSOP77...WTR)

Drawing-No.: 9.700-5342.01-4
Issue: 1: 23.03.09
21785

directional feed

Technical drawings according to DIN specifications

www.vishay.com Vishay Semiconductors

Rev. 2.1, 03-Dec-13  Document Number: 80125

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TAPING VERSION TSOP..TR (SIDE VIEW) DIMENSIONS in millimeters

D. Bugeye (TSOP85...TR)

Drawing-No.: 9.700-5316.01-4
Issue: 1, 12.02.07

Direction of feed

technical drawings according to DIN specifications
LEADER AND TRAILER DIMENSIONS in millimeters

<table>
<thead>
<tr>
<th>Leader</th>
<th>Trailer</th>
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<tr>
<td>no devices</td>
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<td>Start</td>
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<td>min. 200</td>
<td>min. 400</td>
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<td>96 11818</td>
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COVER TAPE REEL STRENGTH
According to DIN EN 60286-3
0.1 N to 1.3 N
300 mm/min. ± 10 mm/min.
165° to 180° peel angle

LABEL
Standard bar code labels for finished goods
The standard bar code labels are product labels and used for identification of goods. The finished goods are packed in final packing area. The standard packing units are labeled with standard bar code labels before transported as finished goods to warehouses. The labels are on each packing unit and contain Vishay Semiconductor GmbH specific data.

VISHAY SEMICONDUCTOR GmbH STANDARD BAR CODE PRODUCT LABEL (finished goods)

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<tr>
<th>PLAIN WRITING</th>
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<tr>
<td>Total length</td>
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DRY PACKAGING
The reel is packed in an anti-humidity bag to protect the devices from absorbing moisture during transportation and storage.

RECOMMENDED METHOD OF STORAGE
Dry box storage is recommended as soon as the aluminum bag has been opened to prevent moisture absorption. The following conditions should be observed, if dry boxes are not available:
- Storage temperature 10 °C to 30 °C
- Storage humidity ≤ 60 % RH max.

After more than 72 h under these conditions moisture content will be too high for reflow soldering.

In case of moisture absorption, the devices will recover to the former condition by drying under the following condition:
192 h at 40 °C + 5 °C / - 0 °C and < 5 % RH (dry air/nitrogen) or
96 h at 60 °C + 5 °C and < 5 % RH for all device containers or
24 h at 125 °C + 5 °C not suitable for reel or tubes.

An EIA JEDEC® standard JSTD-020 level 4 label is included on all dry bags.

OUTER PACKAGING
The sealed reel is packed into a pizza box.

CARTRON BOX DIMENSIONS in millimeters

<table>
<thead>
<tr>
<th>Pizza Box (SMD and Heimdall) (Taping in Reels)</th>
<th>THICKNESS</th>
<th>WIDTH</th>
<th>LENGTH</th>
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