



IR Receivers

**Top Performance in a
Miniature Double Lens
Package**

HEIMDALL



**Superior Performance and
Very Low Profile Design**

BELOBOG



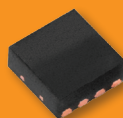
**Universal Surface-Mount
Receiver**

PANHEAD



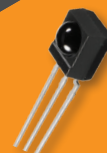
**Maximum Freedom
for Designers**

VSOP



**Good Transmission
Distance**

MOLD



**Attractive Price and
Performance**

MINICAST



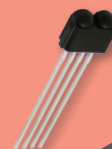
**Best Transmission
Distance**

MINIMOLD



**Industry-First Native
Top-View Receiver in a
Through-Hole Package**

TVMOLD





IR RECEIVERS

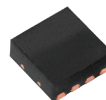
Focus Products

Vishay is the world's leading supplier of infrared (IR) receivers. No other supplier offers a similar breadth of products, holders, application and technical support, and overall knowledge of IR communication. Our customers have confidence that our IR receivers will receive remote control signals while filtering out noise in the most demanding ambient environments. Vishay's IR receivers are used for remote control and for transmissive and reflective sensors.

Code, Applications	Carrier Frequency (kHz)	Best AGC						
			TVCastSMD 6.8 W x 2.6 H x 5.3 D (mm)	Belobog 3.95 W x 3.95 H x 0.8 D (mm)	Belobog Shield 4.3 W x 4.3 H x 1.0 D (mm)	Heimdall No Lens 6.8 W x 3.0 H x 2.3 D (mm)	Heimdall 6.8 W x 3.0 H x 3.2 D (mm)	Panhead 7.5 W x 5.3 H x 4.0 D (mm)
Sony 12 bits, 15 bits, and 20 bits	40	2	TSOP99240TR1	TSOP37S40	n/a	TSOP95240W	TSOP95240	TSOP96240
RC-5, RC-6, Panasonic	36	4	TSOP39436TR1 , TSOP59436TR1 , TSOP99436TR1	TSOP37436 , TSOP57436	TSOP37436H , TSOP57436H	TSOP95438W , TSOP75436W , TSOP77436W	TSOP95436 , TSOP75436 , TSOP77436	TSOP96436 , TSOP36436 , TSOP6436
NEC, Sharp	38	4	TSOP39438TR1 , TSOP59438TR1 , TSOP99438TR1	TSOP37438 , TSOP57438	TSOP37438H , TSOP57438H	TSOP95438W , TSOP75438W , TSOP77438W	TSOP95438 , TSOP75438 , TSOP77438	TSOP96438 , TSOP36438 , TSOP6438
r-step, Thomson RCA	56	4	TSOP39456TR1 , TSOP59456TR1 , TSOP99456TR1	TSOP37456 , TSOP57456	TSOP37456H , TSOP57456H	TSOP95456W , TSOP75456W , TSOP77456W	TSOP95456 , TSOP75456 , TSOP77456	TSOP96456 , TSOP36456 , TSOP6456
MCIR	36	3	TSOP39336TR1 , TSOP59336TR1 , TSOP99336TR1	TSOP37336 , TSOP57336	TSOP37336H , TSOP57336H	TSOP95336W , TSOP75336W , TSOP77336W	TSOP95336 , TSOP75336 , TSOP77336	TSOP96336 , TSOP36336 , TSOP6336
Mitsubishi, RECS-80 Code, XMP, r-step, r-map	38	3	TSOP39338TR1 , TSOP59338TR1 , TSOP99338TR1	TSOP37338 , TSOP57338	TSOP37338H , TSOP57338H	TSOP95338W , TSOP75338W , TSOP77338W	TSOP95338 , TSOP75338 , TSOP77338	TSOP96338 , TSOP36338 , TSOP6338
RCMM	36	3	TSOP99336TR1	TSOP37336	TSOP37336H	TSOP95336W	TSOP75G36 , TSOP95336	TSOP36336 , TSOP96336
Presence Sensor (fixed gain)	38, 56	0	n/a	TSSP570... , TSSP17038	TSSP57038H , TSSP17038H	n/a	TSSP150... , TSSP770... , TSSP950...	TSSP160... , TSSP60... , TSSP960...
Proximity Sensor ⁽¹⁾	56	0	n/a	n/a	n/a	n/a	TSSP15056 , TSSP77056 , TSSP95056	TSSP16056 , TSSP6056 , TSSP96056
Code Learning	Carrier out	n/a	n/a	TSMP97000	n/a	n/a	TSMP77000	TSMP6000
Repeater			n/a	n/a	n/a	n/a	TSMP77138	n/a

Note

⁽¹⁾ See TSSP4056 sensor for fast proximity sensing on page 4



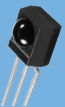
Also available
[VSOP Remote Control IC without Photodiode](#)
Surface-mount 2.0 W x 2.0 H x 0.76 D (mm)

IR RECEIVERS

Focus Products

Holders and bends.
Over 60 different holders and 20 different
lead bend and cut options available.



Code, Applications	Carrier Frequency (kHz)	Best AGC				
			Mold 6.0 W x 6.95 H x 5.6 D (mm)	Minicast 5.0 W x 6.95 H x 4.8 D (mm)	Minimold 5.4 W x 6.35 H x 5.0 D (mm)	TVCast 6.8 W x 2.6 H x 5.3 D (mm)
Sony 12 bits, 15 bits, and 20 bits	40	2	TSOP14240 , TSOP94240	TSOP18240 , TSOP98240	TSOP13240 , TSOP93240	TSOP99240
RC-5, RC-6, Panasonic	36	4	TSOP34436 , TSOP4436 , TSOP14436 , TSOP94436	TSOP38436 , TSOP58436 , TSOP18436 , TSOP98436	TSOP33436 , TSOP53436 , TSOP13436 , TSOP93436	TSOP39436 , TSOP59436 , TSOP99436
NEC, Sharp	38	4, 6	TSOP34438 , TSOP4438 , TSOP14438 , TSOP94638	TSOP38438 , TSOP58438 , TSOP18438 , TSOP98638	TSOP33436 , TSOP53438 , TSOP13438 , TSOP93638	TSOP39438 , TSOP59438 , TSOP99438
r-step, Thomson RCA	56	4	TSOP34456 , TSOP4456 , TSOP14456 , TSOP94456	TSOP38456 , TSOP58456 , TSOP18456 , TSOP98456	TSOP33456 , TSOP53456 , TSOP13456 , TSOP93456	TSOP39456 , TSOP59456 , TSOP99456
MCIR	36	3	TSOP34336 , TSOP4336 , TSOP14336 , TSOP94336	TSOP38336 , TSOP58336 , TSOP18336 , TSOP98336	TSOP33336 , TSOP53336 , TSOP13336 , TSOP93336	TSOP39336 , TSOP59336 , TSOP99336
Mitsubishi, RECS-80 Code, XMP, r-step, r-map	38	3	TSOP34338 , TSOP4338 , TSOP14338 , TSOP94338	TSOP38338 , TSOP58338 , TSOP18338 , TSOP98338	TSOP33338 , TSOP53338 , TSOP13338 , TSOP93338	TSOP39338 , TSOP59338 , TSOP99338
RCMM	36	3, 5	TSOP34336 , TSOP14336 , TSOP94336	TSOP38336 , TSOP18336 , TSOP98336	TSOP33336 , TSOP13336 , TSOP93336	TSOP99336
Presence Sensor (fixed gain)	38 or 56	0	TSSP40.. , TSSP140.. , TSSP940..	TSSP580.. , TSSP180.. , TSSP980..	TSSP530.. , TSSP130.. , TSSP930..	n/a
Proximity Sensor ⁽¹⁾	56	0	TSSP4056 , TSSP14056 , TSSP94056	TSSP98056	TSSP53056 , TSSP13056 , TSSP93056	n/a
Code Learning	Carrier out	n/a	n/a	TSMP58000	n/a	n/a
Repeater			TSMP4138	TSMP58138	n/a	n/a

Note

⁽¹⁾ See TSSP4056 sensor for fast proximity sensing on page 4

- Highest sensitivity and longest transmission distance
- Best overall noise suppression performance via automatic gain control (AGC)
- Lowest power consumption

- Remote control in consumer applications
- Transmissive and reflective sensors
- Learning function for universal remotes



Timing diagram for VSLB3940 Infrared Emitter Signal. The diagram shows a 500 ms period with a 120 ms burst of 38 kHz signal. Below the signal, two logic-level waveforms are shown: 'Strong Reflection' (high during burst) and 'Weak Reflection' (low during burst).

Useful Links

- IR Receiver Home Page
www.vishay.com/ir-receiver-modules/
- IR Receiver Selector Guide
www.vishay.com/doc?49009
- Infrared Light Barriers
www.vishay.com/doc?49650
- Reflective Sensors
www.vishay.com/doc?49664

