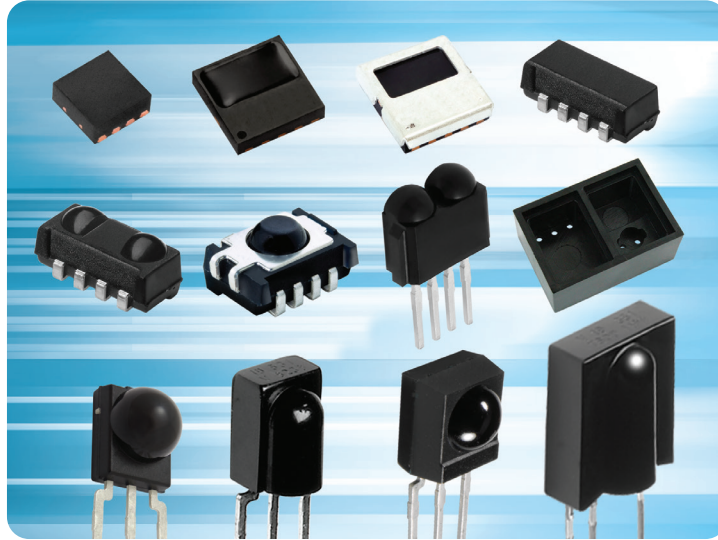




The DNA of tech.™

World's Leading Supplier of Infrared (IR) Receivers



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. Besides remote control applications, Vishay's IR receivers are used as reflective or light barrier sensors and for code learning and repeater functions.

APPLICATIONS

- Remote control
- Reflective and light barrier sensors
- Code learning and repeater functions

RESOURCES

- More IR receiver products at: www.vishay.com/ir-receiver-modules/
- Full optoelectronics portfolio at: www.vishay.com/optoelectronics/
- Technical questions contact: IRR@vishay.com
- Sales contacts: www.vishay.com/doc?99914



OPTOELECTRONICS

Infrared (IR) Receivers

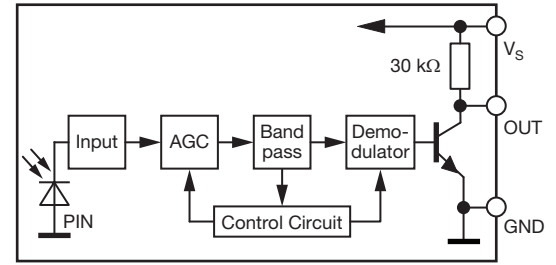
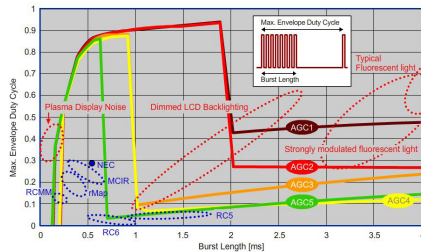
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Remote Control

No single automatic gain control (AGC) algorithm can completely suppress all noise and pass data signals.

Vishay has developed five different AGC response algorithms based on coding schemes and ambient noise conditions. These AGC algorithms allow developers to choose the most appropriate receiver for their application and coding scheme.

Any signal below the curve will be received as a legitimate data signal and passed to the output.
Any signal above the curve will be filtered out as noise.



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



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...	TSSP57038H	n/a	TSSP770... , TSSP950...	TSSP60... , TSSP960...
Proximity Sensor ⁽¹⁾	56	0	n/a	TSSP57056	TSSP57056H	n/a	TSSP77056 , TSSP95056	TSSP6056 , TSSP96056
Code Learning	Carrier out	n/a	n/a	TSMP97000	n/a	n/a	TSMP95000	TSMP96000
Repeater			n/a	n/a	n/a	n/a	TSMP95100	n/a

Note

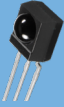
⁽¹⁾ See TSSP4056 sensor on page 4 for fast proximity sensing



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OPTOELECTRONICS

Infrared (IR) Receivers

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... , TSSP940..	TSSP580... , TSSP980..	TSSP530... , TSSP930..	n/a
Proximity Sensor ⁽¹⁾	56	0	TSSP4056 , TSSP94056	TSSP98056	TSSP53056 , TSSP93056	n/a
Code Learning	Carrier out	n/a	n/a	TSMP98000	n/a	n/a
Repeater			TSMP94100	TSMP98100	n/a	n/a

Note

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

Also available:



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



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Mid Range Sensors

Presence of an Object

For details on mid range sensors and object detection:

- Mid Range Infrared Sensors for Object Detection and Ranging Product Literature Brochure (www.vishay.com/doc?49009)
- Vishay's TSSP4056 Sensor for Fast Proximity Sensing Applications Note (www.vishay.com/doc?82741)
- Vishay Infrared Receivers for Presence Sensor Applications (www.vishay.com/doc?82904)
- Light Barrier (www.vishay.com/doc?49650)

The TSSP Sensor Evaluation Kit is available on our website: www.vishay.com/doc?80345

Proximity Sensor Capable of Readings in 5 ms
TSSP4056 shown with VSLB3940 Emitter and TSSP-HA Holder

