



electronic & machine A.S.

FACTORY ADDRESS :

OĞLANANASI ATATÜRK MAH. 2.CAD. ESTİM SAN. SİT. NO:129/ MENDERES / İZMİR-TURKEY

TEL +90 0232 253 56 96 - 69

www.estimate.com.tr

[bilgi@estimate.com.tr](mailto: bilgi@estimate.com.tr)

RAILROAD

PRODUCT

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LED Technology for New and Old Signals

- Low whole-of-life cost
- Long service life
- Low power consumption
- Complies with AREMA requirements 7.1.10 and 3.2.37
- 5-Year standart warranty

LED signals provide constant brightness over a wide voltage range they do not need to set the voltage at the signal head during installation. They Use about half the power of incandescent signals, whic allows you to use smaller batteries and chargers.

You can upgrade your current signals to increase safety and reduce maintenance of your signalling system.



Specifications

Light diameter	200 mm
Light source	112x5 mm Led
Colour, wavelength and chromaticity	Red 625 nm
Light angle	30 degree
Lens material	Polycarbonat Uv Stabilized
Visor material	Galvanized Sheet
Housing material	Cast aluminium
Protection class	IP 65
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	24VDC
Working temp	-40° C to +70° C
Current	Constant, Regulated
Typical sighting distance	200 m



Demiryolu hemzemin geçitlerde, hemzemin geçitlerinde kullanılan sesli uyarı cihazı

Özellikler

Besleme voltajı	12VDC / 24VDC
Çalışma ortamı	-40° C to +70° C
Akım	0.5 Amp.
Çıkış Gücü (ses)	10w
Cotina PH-41	8 OHM / 106dB



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- Complies with AREMA requirements 7.1.10 and 3.2.37
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Upgrade your current signals to increase safety and reduce maintenance of your signalling system.



Specifications

Light diameter	50 mm (2")
Light dource	Led
Led diameter	5 mm
Led quantity	24
Colour, wavelength and chromaticity	Red 625 nm
Housing material	Rubber
Front material	Pleksiglas Uv Stabilized
Protection class	IP 65
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	24VDC
Working temp	-40° C to +70° C



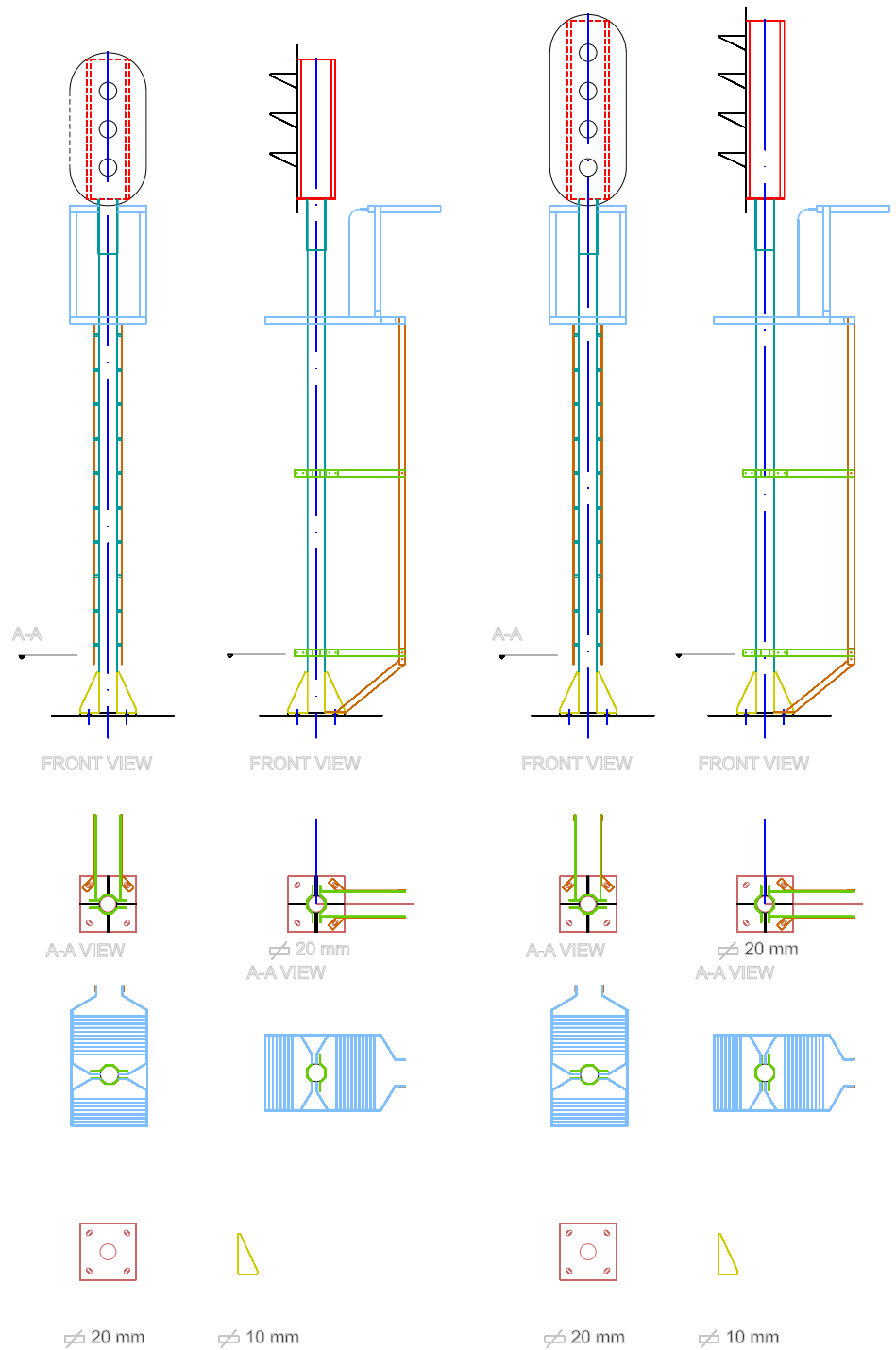
Arm Material : Aluminum
Reflective Sheet : Red/White

This platform designed for the maintenance of signal lights

Designed with worker safety

Is compatible with all known railway standards

Easy slope climbable ladder



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Specifications

Light diameter	200 mm (8",12")
Light dource	Led
Led diameter	5 mm
Led quantity	112
Colour, wavelength and chromaticity	Red 625 nm Green 505 nm Yellow 595 nm
Housing material	Cast aluminium
Visor material	DKP Sheet
Front material	Pleksiglas Uv Stabilized
Protection class	IP 65
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	Day >24VDC, Night<18VDC
Working temp	-40° C to +70° C
Current	Constant, Regulated
Typical sighting distance	1 Km



Main Signals



Main Signal housing

- Low whole-of-life cost
- Long service life
- Low power consumption
- Complies with AREMA requirements 7.1.10 and 3.2.37
- With Fresnel lens can be seen long distance
- 5-Year standart waranty

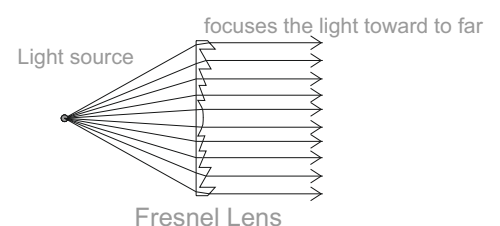
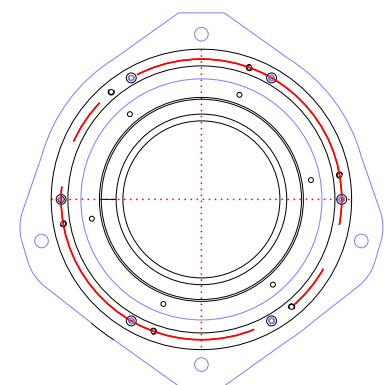
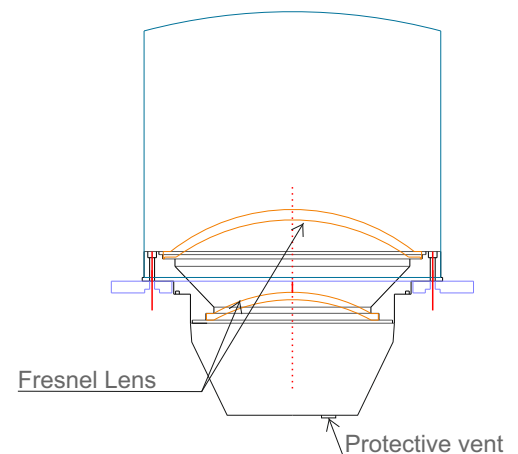
LED Technology for New and Old Signals

LED signals provide constant brightness over a wide voltage range no need to set the voltage at the signal head during installation. Uses about half the power of incandescent signals, allowing the use of smaller batteries and chargers.

Upgrade your current signals to increase safety and reduce maintenance of your signalling system.

Specifications

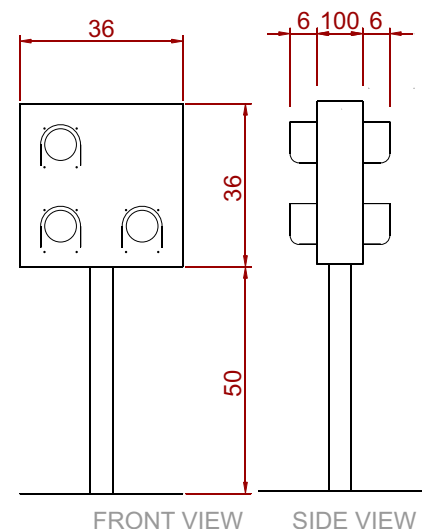
Light diameter	200 mm
Light source	Power Led
Colour, wavelength and chromaticity	Red 625 nm
	Green 505 nm
	Yellow 595 nm
	White $x=0.262, y=0.233$
Medium spread	< 13 degree
Lens type	Fresnel
Lens material	Polycarbonat Uv Stabilized
Visor material	Galvanized Sheet
Housing material	Cast aluminium
Protection class	IP 67
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	Day >24VDC, Night<18VDC
Working temp	-40° C to +70° C
Current	Constant, Regulated
Typical sighting distance	1 Km



Route indicator on top, which tellsto the train drivers which way their train is to be routed.

Specifications

Light diameter	70 mm
Light source	5 mm x 36 Led
Led Colour, wavelength and chromaticity	White
Lens material	Polycarbonat Uv Stabilized
Visor material	Galvanized Sheet
Housing material	Cast aluminium
Protection class	IP 65
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	9V DC - 37 VDC
Working temp	-40° C to +70° C
Typical sighting distance	300 m

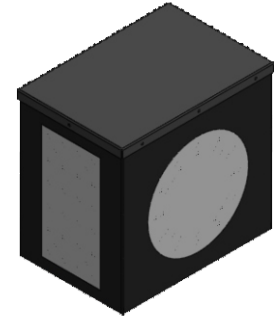
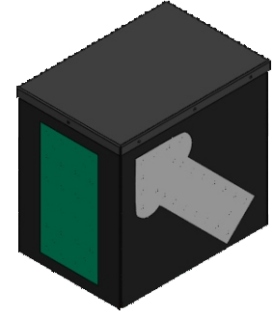


LED Technology for New and Old Signals

As it is difficult to see the lie of a switch from a distance, especially at night, railways uses point indicators which are illuminated.

Specifications

Işık kaynağı	Led
Led çapı	5 mm
Renk, dalga boyu ve renklilik	Green 505 nm White x=0.262, y=0.233
Gövde Malzemesi	DKP Sheet 1.2 mm
Koruma sınıfı	IP 65
Dalgalanma koruması	45 Vrms applied for 80 ms
Elektriksel gürültü	AREMA part 11.5.1 Class A FCC title 45 B section 15
Titreşime karşı direnç	Arema Section Class B
Başarılı test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Besleme gerilimi	24VDC/VAC
Çalışma sıcaklığı	-40° C to +70° C
Görüş mesafesi	500 m



Night View

Red stop warning light is activated when the barrier arm is closed

Specifications

Light diameter	300 mm
Light source	5 mm Led
Colour, wavelength and chromaticity	Red 625 nm
Lens material	Polycarbonat Uv Stabilized
Visor material	Galvanized Sheet
Housing material	Cast aluminium
Protection class	IP 65
Surge protection	45 Vrms applied for 80 ms
Electrical noise	AREMA part 11.5.1 Class A FCC title 45 B section 15
Resistance to vibration	Arema Section Class B
Passed test	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Supply voltage	9V DC - 37 VDC
Working temp	-40° C to +70° C
Typical sighting distance	300 m



Demiryolu hemzemin geçitlerde, hemzemin geçidin durumu hakkında

Makiniste bilgi veren led ışıklı uyarı sinyalıdır.

Özellikler

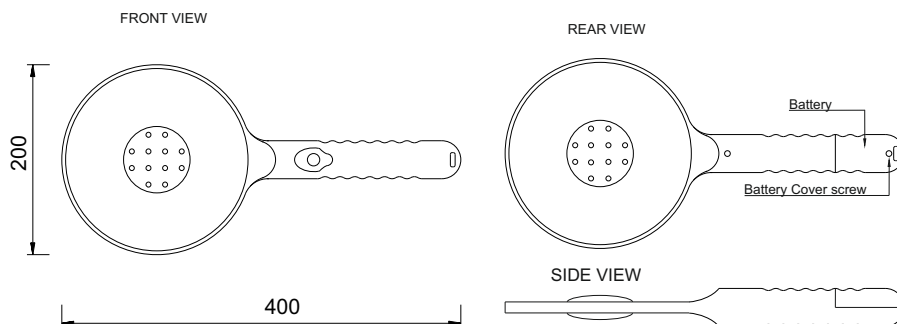
İşık alanı	600x430mm
İşık kaynağı	Led
Led çapı	5 mm
Led adedi	394
Renk, dalga boyu ve renklilik	Kırmızı 256 EA/ 625 nm Yeşil 138 EA/ 505 nm
Ürün Boyutları	700x620x550 mm
Gövde malzemesi	2mm Galvaniz Saç
Siperlik malzemesi	1.5mm Galvaniz Saç
Ön cam	Pleksiglas Uv Stabilized
Koruma sınıfı	IP 65
Dalgalanma koruması	45 Vrms applied for 80 ms
Elektriksel gürültü	AREMA part 11.5.1 Class A FCC title 45 B section 15
Titreşim direnci	Arema Section Class B
Geçilen testler	IEC EN 55011, EN 6100-4-6, EN 6100-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-2
Besleme voltajı	12VDC / 24VDC
Çalışma ortamı	-40° C to +70° C
Akım	Constant, Regulated
Tipik görünebilirlik mesafesi	800m
Geri Dönüş Bilgisi	On/Off Akım Kontrollü



- The polycarbonate lenses are very strong only the strokes by hammer can give damage
- The touch buttons are used easily for illumination and to avoid leaving the equipment on when it is not used.
- The handle is completely comfortable and ergonomic
- 12 smd type LED on both surface
- Carrying the equipment is easy due to hanging apparatus
- The weight is only 450 gr including the batteries
- 5-Year standart warranty

Specifications

Light diameter	70 mm
Light source	SMD Led
Colour, wavelength and chromaticity	Red 625 nm Green 525 nm
Lens material	Polycarbonat Uv Stabilized
Body materiall	ABS
Power supply	R14 x 2 Alkaline Battery
Protection class	IP 65
Working temp	-40° C to +70° C
Typical sighting distance	50 m



LED Technology

The rear warning lights on freight trains are typically battery powered red and yellow LED technology lamps that flash on and off approximately 60 times per minute

Specifications

Order Code : ESPORT

Light diameter	70 mm
Light source	Led
Colour, wavelength and chromaticity	Red 625 nm Yellow 588 nm
Lens material	Polycarbonat Uv Stabilized
Body material	DKP Sheet
Power supply	12 V 7Ah Lead Acid Battery
Night detection	LDR
Low battery	warning led on the front
Full charged battery	Green led on the front
Flash period	1 Hz
Protection class	IP 65
Working temp	-40° C to +70° C
Typical sighting distance	500 m



Specifications

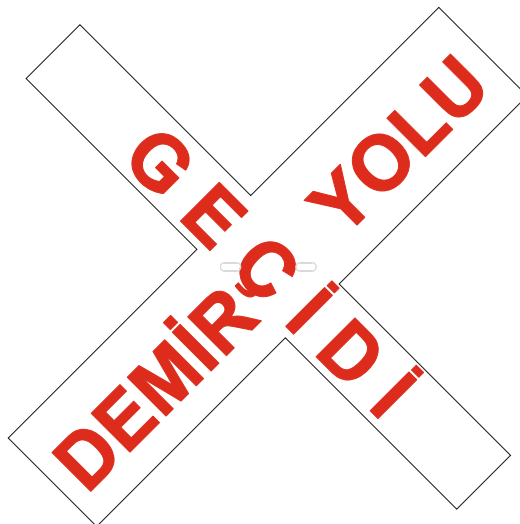
Sheet material	2 mm Galvanized sheet
Text	Red reflective vinyl



Track Sign



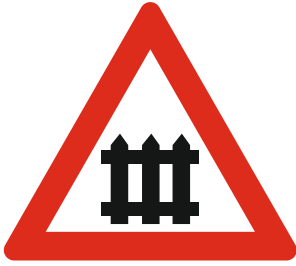
When the light turns red,
the driver has to stop for the pedestrians



automatic barrier gate indicates that the railway

Özellikler

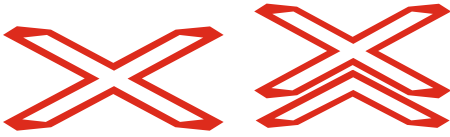
Malzeme	2 mm Galvaniz
Text	Red reflective vinil ASTM 4956-09Tip4



T25



T26

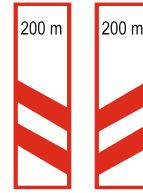


T27a
KontROLSÜZ
Demiryolu geçidi
Tek hat

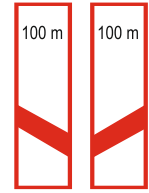
T27b
KontROLSÜZ
Demiryolu geçidi
Çift hat



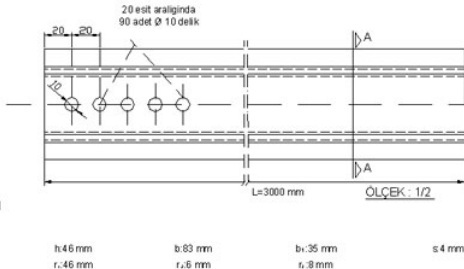
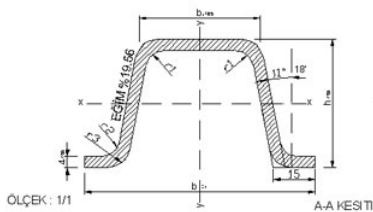
T28b-a



T29b-a



T30b-a



Omega Pole
Thicknes : 4 mm
Length : 3 Metre
Galvanized steel



TCDD Turkish Railways
Ankara and Istanbul



Savronik
Turcmenistan Railways



Kolin Construction

Kayseri Northern Variant Railway Construction (including infrastructure, superstructure, signalization and telecommunication)
Republic Of Turkey, Ministry Of Transportation, General Directorate Of State Railways



IZBAN A.S.

Aliaga - Cumaovası metro line Izmir Turkey



ANSALDO STS

Gebze-Kosekoy section of the high-speed rail line between
Ankara and Istanbul



ALSTOM

Kütahya-Eskişehir Line



Revenga

Samsun-Kalın Line



E+M

Afyon-Karakuyu Line



Karayolları Genel Müdürlüğü



Jandarma Genel Komutanlığı



İzmir Büyükşehir Belediyesi

