PRIMA

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

Fluorescent lighting fittings

Use:

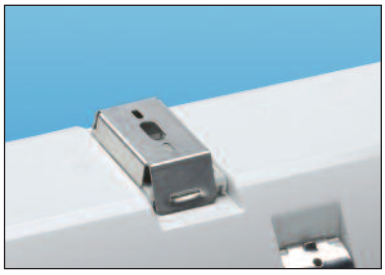
Industrial indoor and outdoor areas, sports grounds, workshops, garages, agricultural buildings, warehouses and laboratories without danger of explosion of gas and flammable vapour.
Lighting fittings are resistant to dust, damp and jetting water and in modification with PC diffuser have high impact resistance.
In corrosive environment it is necessary to have respect to possible fumes which reduce the applicability of plastics.

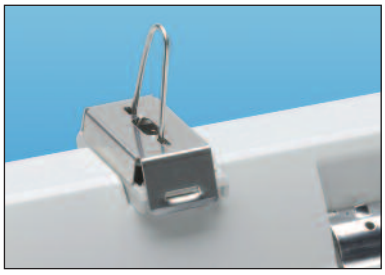
Description, optics:

The **body** is made by injection of impact and heat resistant polycarbonate of grey colour. The body is fitted with flush clips for the fixing of the diffuser. The clips are made of polyamid with fibreglass. Optionally the stainless steel clips are available.
The IP protection is provided with polyurethan sealing injected in the body.
The fitting's **reflector** is produced of a steel sheet. It is powder coated with white colour in automatic spraying line. The reflector is clicked into the body through a distance holder made of polyamid.
At the installation higher than 6 m it is recommended to fit the luminaire with an additional parabolic aluminium reflector (PAR) which alter the luminous flux.
The **diffuser** is made by injection of plastics in two options:
- transparent acrylic – marked **AC** – UV stabilized
- transparent polycarbonate – marked **PC** – UV stabilized with a very high impact resistance

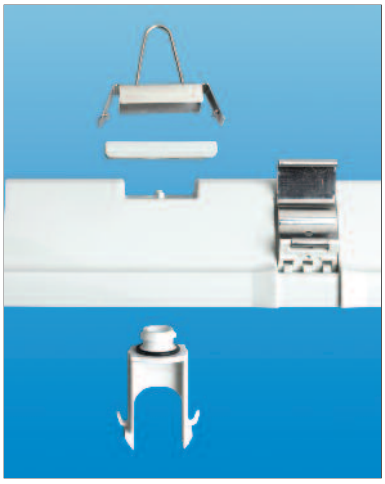
IP66

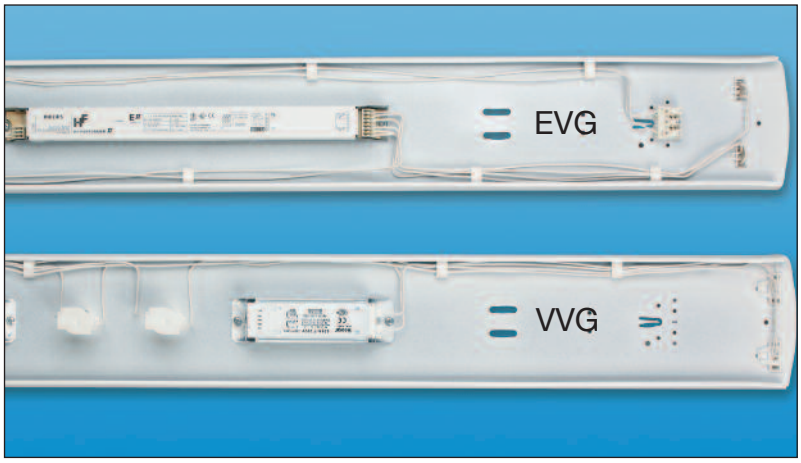
230 V
50 Hz



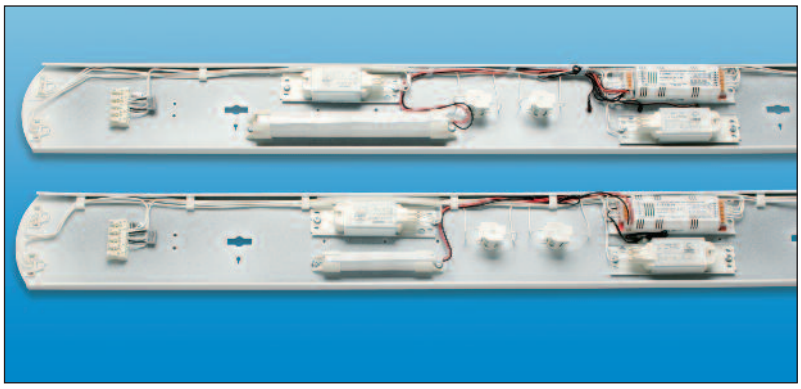


The way of fitting´s suspension:
- directly on a surface (also flammable) using stainless steel brackets
- using stainless steel hooks delivered as standard accessories





Hanging of the reflector during installation and repair.



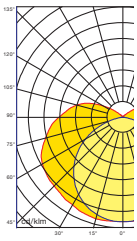
Maintained emergency luminaire
- with 3 hrs emergency source
- with 1 hr emergency source

Modifications:
- (code 90xx0) – The **basic type** is LPF wired, equipped with a radio-interference capacitor, starters, a screwless three-pole terminal block, 2 pcs of metal suspension sets and two cable glands
- (code 90xx1) – **HPF wired** - the lighting fitting can be additionally compensated with parallel compensating capacitor
- (code 90xx2) – **Through wired** - for the installation of the luminaires into rows. The luminaire is fitted with 1 phase or 3 phase wiring (1.5 mm^2) and additional terminal block. (18W lighting fittings are not produced in this modification). 2.5 mm^2 through wiring available on demand.
- (code 90xx3) – **Through wired and compensated**
- (code 90xx5) – **With electronic ballast for T8 lamps** – suitable for the installation where the luminaires are constantly working
- (code 90xx6) - **With electronic ballast for T8 lamps and through wired**
- (code 90xx7) – **With dimmable electronic ballast** – the luminaire is equipped and adapted for using of an automatic dimming control. Analogue (DIM) or digital (DALI) dimmable ballasts are available
- (code 90xx8) – **Maintained emergency lighting fittings** – with an independent emergency source is running under usual conditions as other fittings. After power interruption it starts to run in the emergency mode. Only one tube is working with double-tube fitting then.
  - marked **M1h** – with 1 hr emergency source – battery capacity 1,5 Ah
  - marked **M3h** – with 3 hrs emergency source – battery capacity 4,0 Ah
- (code 90xx9) – **Non-maintained emergency lighting fitting** – is working only after power interruption

Delivery of plastic and metal **components** for customers' own assembly is available.

PRIMA 136 PC E

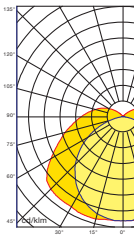
η = 89 % I_{max} = 166 cd/klm γ = 10°



angle [°]	C0-180	C90-270
0	165	165,
10	166	163
20	165	155
30	160	141
40	156	121
50	153	97
60	148	68
70	135	36
80	119	10
90	102	2
100	85	2
110	65	0
120	37	0
130	13	0
140	4	0
150	2	0
160	1	0
170	0	0
180	0	0

PRIMA 236 PC E

η = 81 % I_{max} = 168 cd/klm γ = 20°



angle [°]	C0-180	C90-270
0	165	165
10	165	162
20	168	153
30	164	139
40	164	118
50	158	93
60	132	64
70	105	34
80	84	11
90	67	3
100	52	2
110	40	0
120	26	0
130	14	0
140	6	0
150	2	0
160	0	0
170	0	0
180	0	0

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	acrylic diffuser (AC)						
90110	PRIMA 118 AC	1x18	T8/G13	92	1,3	662	350
90120	PRIMA 136 AC	1x36	T8/G13	92	2,2	1272	700
90130	PRIMA 158 AC	1x58	T8/G13	90	2,9	1572	940
90140	PRIMA 218 AC	2x18	T8/G13	85	2,0	662	350
90150	PRIMA 236 AC	2x36	T8/G13	84	3,5	1272	700
90160	PRIMA 258 AC	2x58	T8/G13	82	4,7	1572	940
	acrylic diffuser (AC) – with electronic ballast						
90115	PRIMA 118 AC E	1x18	T8/G13	92	1,0	662	350
90125	PRIMA 136 AC E	1x36	T8/G13	92	1,8	1272	700
90135	PRIMA 158 AC E	1x58	T8/G13	90	2,3	1572	940
90145	PRIMA 218 AC E	2x18	T8/G13	85	1,6	662	350
90155	PRIMA 236 AC E	2x36	T8/G13	84	2,7	1272	700
90165	PRIMA 258 AC E	2x58	T8/G13	82	3,7	1572	940
	polycarbonate diffuser (PC) - impact resistant						
90310	PRIMA 118 PC	1x18	T8/G13	89	1,3	662	350
90320	PRIMA 136 PC	1x36	T8/G13	89	2,2	1272	700
90330	PRIMA 158 PC	1x58	T8/G13	87	2,9	1572	940
90340	PRIMA 218 PC	2x18	T8/G13	82	2,0	662	350
90350	PRIMA 236 PC	2x36	T8/G13	81	3,5	1272	700
90360	PRIMA 258 PC	2x58	T8/G13	79	4,7	1572	940
	polycarbonate diffuser (PC) - impact resistant with electronic ballast						
90315	PRIMA 118 PC E	1x18	T8/G13	89	1,0	662	350
90325	PRIMA 136 PC E	1x36	T8/G13	89	1,8	1272	700
90335	PRIMA 158 PC E	1x58	T8/G13	87	2,3	1572	940
90345	PRIMA 218 PC E	2x18	T8/G13	82	1,6	662	350
90355	PRIMA 236 PC E	2x36	T8/G13	81	2,7	1272	700
90365	PRIMA 258 PC E	2x58	T8/G13	79	3,7	1572	940

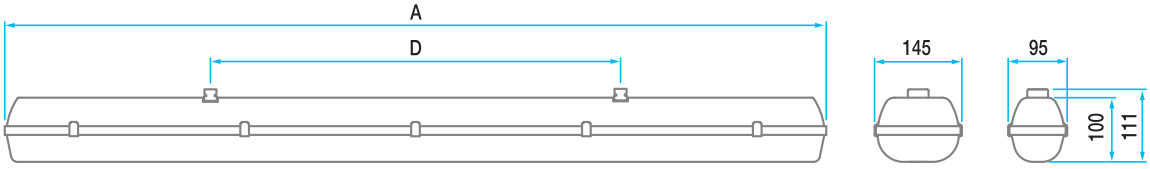
Modification with screw cable glands – Pg 13,5.

902xx modification **ACc** – acrylic diffuser – with stainless steel clips

904xx modification **PCc** – polycarbonate diffuser – with stainless steel clips

Stainless steel clip (c).

Clips made of polyamid filled with fibreglass



Ø 26 G 13

1-2,5 mm²

t 105 °C

t_a 45°C

1F

3F

VVG

EVG

EVG DIMM

EMERGENCY

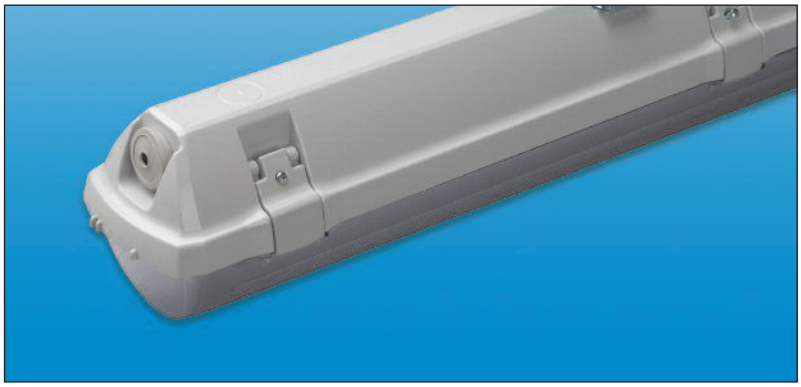
0,3J IK 03 AC

5J IK 08 PC

AC 650°C

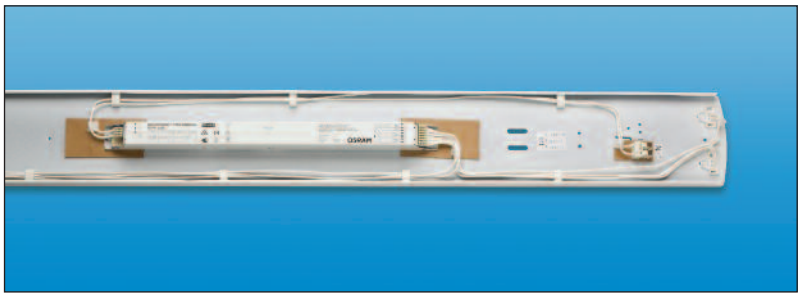
PC 850°C

PRIMA II



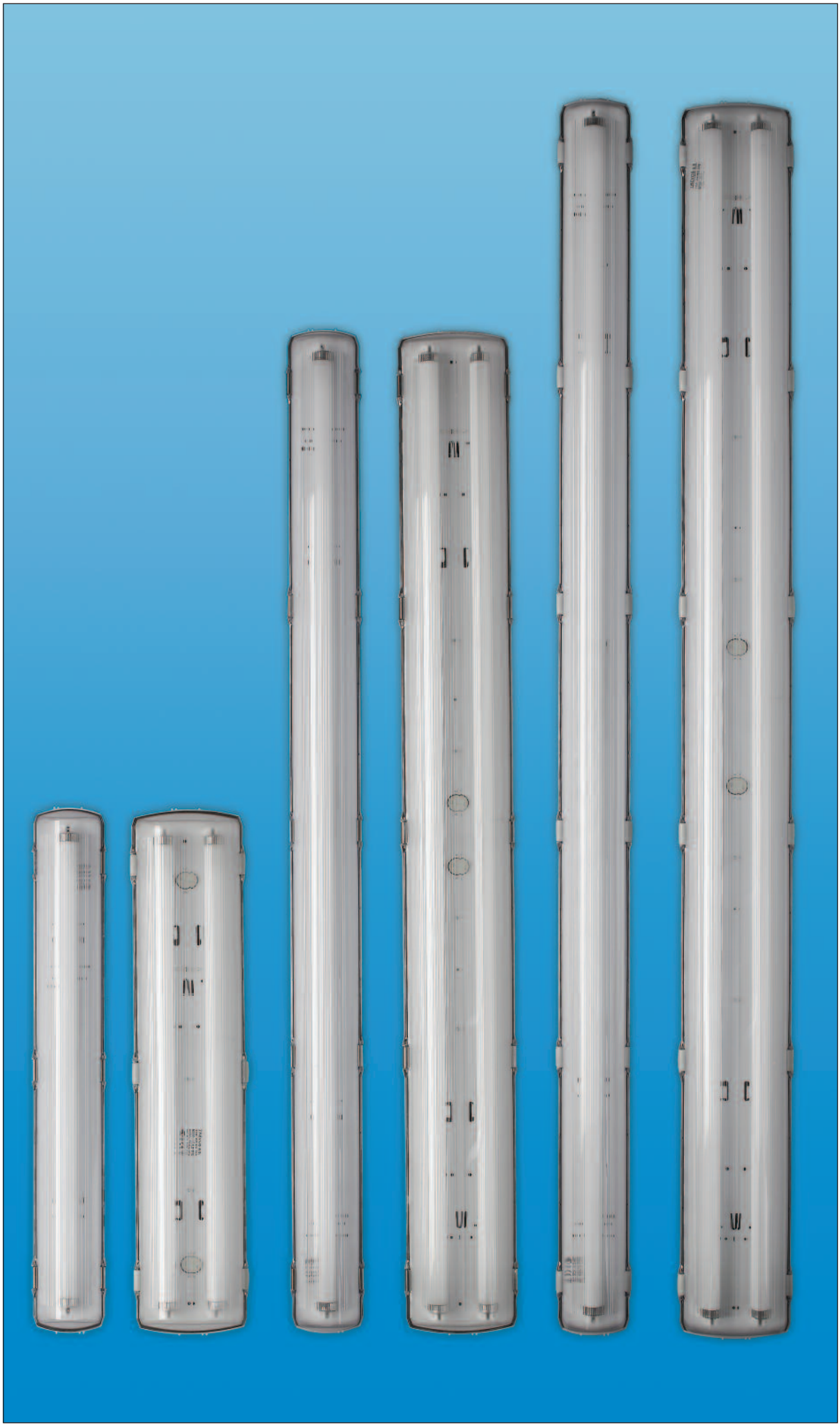
Clips made of polyamid filled with fibreglass.
It can be blocked with a screw to be able to achieve class II insulation.

Stainless steel clip (c)
It can be blocked with a screw to be able to achieve class II insulation.



Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	acrylic diffuser (AC) – with electronic ballast						
92115	PRIMA II 118 AC E	1x18	T8/G13	92	1,0	662	350
92125	PRIMA II 136 AC E	1x36	T8/G13	92	1,8	1272	700
92135	PRIMA II 158 AC E	1x58	T8/G13	90	2,3	1572	940
92145	PRIMA II 218 AC E	2x18	T8/G13	85	1,6	662	350
92155	PRIMA II 236 AC E	2x36	T8/G13	84	2,7	1272	700
92165	PRIMA II 258 AC E	2x58	T8/G13	82	3,7	1572	940

922x5 modification **ACc** – acrylic diffuser – with stainless steel clips and electronic ballast
923x5 modification **PC** – polycarbonate diffuser – with plastic clips
924x5 modification **PCc** – polycarbonate diffuser – with stainless steel clips and electronic ballast



PRIMA - T5

Modification with electronic ballast T5

- in high efficiency range
- in high output range
- energy efficiency index EEI=A2
- the consumption of electric energy is lower up to 10 % in comparison with T8 electronic ballast and up to 40 % with magnetic ballast
- with smaller fluorescent tubes' diameter (16 mm) and with the change of max. luminous flux temperature from 25 °C to 35 °C it is achieved higher luminous efficiency by 10-14 %

Modification with electronic ballast T5 Intelligent

Intelligent recognition of HE or HO fluorescent tubes enables application of tubes of the same length but different output

HE 14W + HO 24W	549 mm
HE 28W + HO 54W	1149 mm
HE 35W + HO 49W + HO 80 W	1449 mm

Modification with dimmable electronic ballast T5

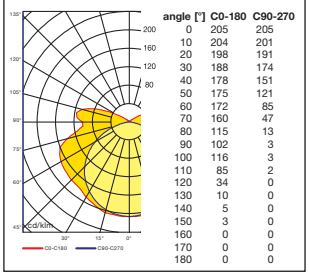
- operated with analogue signal - 1-10V
- operated with digital DALI system or with Touch DIM function
- energy efficiency index EEI=A1
- it is possible to spare up to 80 % of the consumption of electric energy by the dimming based on the daylight intensity

Modification with electronic ballast T5 HO – PAR

- high output modification with parabolic reflector enables to concentrate the luminous flux into deeper curve. It reaches sufficient illumination in halls with height up to 10 m.

PRIMA 128 PC ET5

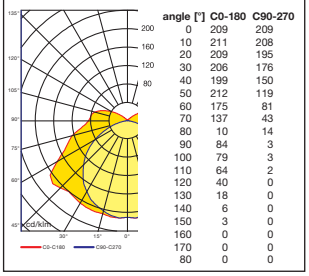
η = 94 % I_{max} = 205 cd/klm γ = 0°



angle [°]	C0-180	C90-270
0	205	205
10	204	201
20	198	191
30	188	174
40	178	151
50	175	121
60	172	85
70	160	47
80	115	13
90	102	3
100	116	3
110	85	2
120	34	0
130	10	0
140	5	0
150	3	0
160	0	0
170	0	0
180	0	0

PRIMA 228 PC ET5

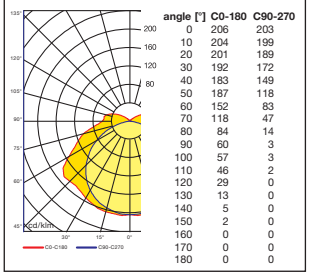
η = 90 % I_{max} = 211 cd/klm γ = 130°



angle [°]	C0-180	C90-270
0	209	209
10	211	208
20	209	195
30	206	176
40	199	150
50	212	119
60	175	81
70	137	43
80	10	14
90	84	3
100	79	3
110	64	2
120	40	0
130	18	0
140	6	0
150	3	0
160	0	0
170	0	0
180	0	0

PRIMA 328 PC ET5

η = 83 % I_{max} = 206 cd/klm γ = 0°

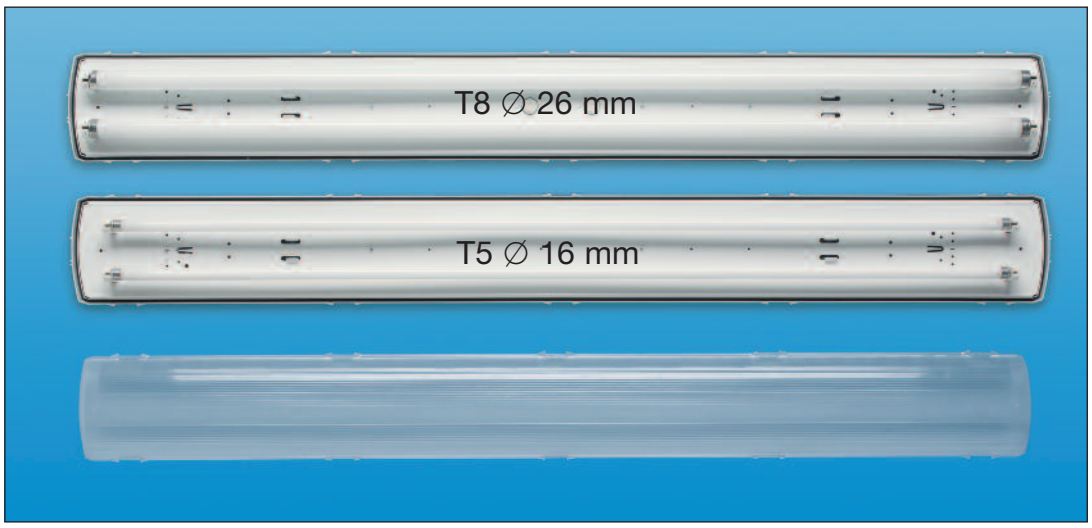


angle [°]	C0-180	C90-270
0	206	203
10	204	199
20	201	189
30	192	172
40	183	149
50	187	118
60	152	83
70	118	47
80	84	14
90	60	3
100	57	3
110	46	2
120	29	0
130	13	0
140	5	0
150	2	0
160	0	0
170	0	0
180	0	0

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	acrylic diffuser (AC) – with electronic ballast – high efficiency range						
90510	PRIMA 114 AC ET5	1x14	T5/G5	97	1,0	662	350
90520	PRIMA 128 AC ET5	1x28	T5/G5	97	1,8	1272	700
90530	PRIMA 135 AC ET5	1x35	T5/G5	96	2,3	1572	940
90540	PRIMA 214 AC ET5	2x14	T5/G5	93	1,7	662	350
90550	PRIMA 228 AC ET5	2x28	T5/G5	93	2,7	1272	700
90560	PRIMA 235 AC ET5	2x35	T5/G5	92	3,7	1572	940
90500	PRIMA 328 AC ET5	3x28	T5/G5	85	3,9	1272	700
	acrylic diffuser (AC) – with electronic ballast – high output range						
90515	PRIMA 124 AC ET5	1x24	T5/G5	91	1,0	662	350
90525	PRIMA 154 AC ET5	1x54	T5/G5	90	1,8	1272	700
90535	PRIMA 180 AC ET5	1x80	T5/G5	88	2,3	1572	940
90575	PRIMA 149 AC ET5	1x49	T5/G5	91	2,3	1572	940
90545	PRIMA 224 AC ET5	2x24	T5/G5	87	1,7	662	350
90555	PRIMA 254 AC ET5	2x54	T5/G5	86	2,7	1272	700
90565	PRIMA 280 AC ET5	2x80	T5/G5	84	3,7	1572	940
90585	PRIMA 249 AC ET5	2x49	T5/G5	87	3,7	1572	940
	polycarbonate diffuser (PC) - impact resistant with el. ballast – high efficiency range						
90710	PRIMA 114 PC ET5	1x14	T5/G5	94	1,0	662	350
90720	PRIMA 128 PC ET5	1x28	T5/G5	94	1,8	1272	700
90730	PRIMA 135 PC ET5	1x35	T5/G5	93	2,3	1572	940
90740	PRIMA 214 PC ET5	2x14	T5/G5	90	1,7	662	350
90750	PRIMA 228 PC ET5	2x28	T5/G5	90	2,7	1272	700
90760	PRIMA 235 PC ET5	2x35	T5/G5	89	3,7	1572	940
90700	PRIMA 328 PC ET5	3x28	T5/G5	83	3,9	1272	700
	polycarbonate diffuser (PC) - impact resistant with el. ballast – high output range						
90715	PRIMA 124 PC ET5	1x24	T5/G5	88	1,0	662	350
90725	PRIMA 154 PC ET5	1x54	T5/G5	87	1,8	1272	700
90735	PRIMA 180 PC ET5	1x80	T5/G5	85	2,3	1572	940
90775	PRIMA 149 PC ET5	1x49	T5/G5	88	2,3	1572	940
90745	PRIMA 224 PC ET5	2x24	T5/G5	84	1,7	662	350
90755	PRIMA 254 PC ET5	2x54	T5/G5	83	2,7	1272	700
90765	PRIMA 280 PC ET5	2x80	T5/G5	81	3,7	1572	940
90785	PRIMA 249 PC ET5	2x49	T5/G5	84	3,7	1572	940

906xx modification **T5 ACc** – acrylic diffuser – with stainless steel clips and electronic ballast
908xx modification **T5 PCc** – polycarbonate diffuser – with stainless steel clips and electronic ballast

• Maximum ambient temperature with T5 HO range is decreased to 35 °C.



Ø 16 G 5
1-2,5 mm²
t 105 °C
t_a 35 °C
1F
3F
EVG
EVG DIMM
EMERGENCY
0,3J IK 03 AC
5J IK 08 PC
AC 650°C
PC 850°C

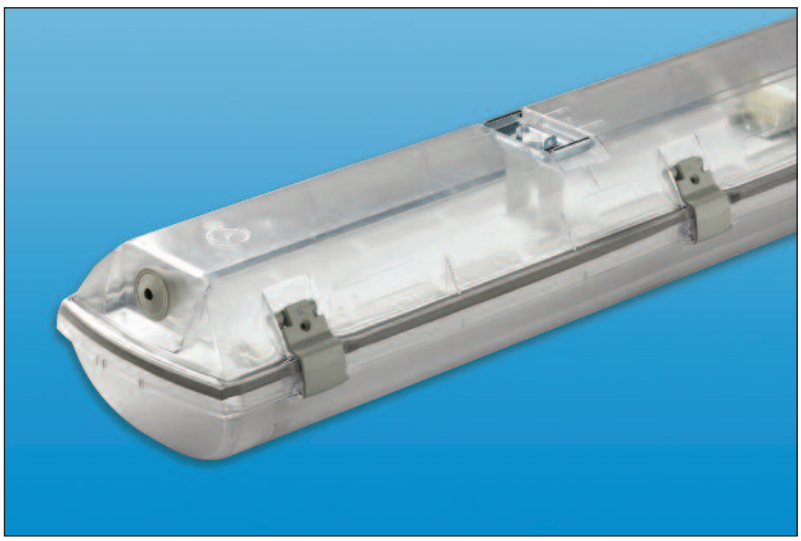
PRIMA-TRS

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

fluorescent lighting fittings for **direct and indirect illumination DI-IN**

Use:
PRIMA TRS range is suitable for direct and indirect illumination in premises with low suspension height.

The body and diffuser are made by injection of transparent polycarbonate.
The reflector is made of white powder coated steel sheet and is adapted to indirect illumination.



Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
35310	PRIMA 118 TRS PC	1x18	T8/G13	92	1,3	662	350
35320	PRIMA 136 TRS PC	1x36	T8/G13	92	2,2	1272	700
35330	PRIMA 158 TRS PC	1x58	T8/G13	90	2,9	1572	940
35340	PRIMA 218 TRS PC	2x18	T8/G13	85	2,0	662	350
35350	PRIMA 236 TRS PC	2x36	T8/G13	84	3,5	1272	700
35360	PRIMA 258 TRS PC	2x58	T8/G13	82	4,7	1572	940
	with electronic ballast						
35315	PRIMA 118 TRS PC E	1x18	T8/G13	92	1,0	662	350
35325	PRIMA 136 TRS PC E	1x36	T8/G13	92	1,8	1272	700
35335	PRIMA 158 TRS PC E	1x58	T8/G13	90	2,3	1572	940
35345	PRIMA 218 TRS PC E	2x18	T8/G13	85	1,6	662	350
35355	PRIMA 236 TRS PC E	2x36	T8/G13	84	2,7	1272	700
35365	PRIMA 258 TRS PC E	2x58	T8/G13	82	3,7	1572	940

354xx modification PCc – with stainless steel clips

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	with T5 electronic ballast – high efficiency range						
35710	PRIMA 114 TRS PC ET5	1x14	T5/G5	97	1,0	662	350
35720	PRIMA 128 TRS PC ET5	1x28	T5/G5	97	1,8	1272	700
35730	PRIMA 135 TRS PC ET5	1x35	T5/G5	96	2,3	1572	940
35740	PRIMA 214 TRS PC ET5	2x14	T5/G5	93	1,7	662	350
35750	PRIMA 228 TRS PC ET5	2x28	T5/G5	93	2,7	1272	700
35760	PRIMA 235 TRS PC ET5	2x35	T5/G5	92	3,7	1572	940
	with T5 electronic ballast – high output range						
35715	PRIMA 124 TRS PC ET5	1x24	T5/G5	91	1,0	662	350
35725	PRIMA 154 TRS PC ET5	1x54	T5/G5	90	1,8	1272	700
35735	PRIMA 180 TRS PC ET5	1x80	T5/G5	88	2,3	1572	940
35775	PRIMA 149 TRS PC ET5	1x49	T5/G5	91	2,3	1572	940
35745	PRIMA 224 TRS PC ET5	2x24	T5/G5	87	1,7	662	350
35755	PRIMA 254 TRS PC ET5	2x54	T5/G5	86	2,7	1272	700
35765	PRIMA 280 TRS PC ET5	2x80	T5/G5	84	3,7	1572	940
35785	PRIMA 249 TRS PC ET5	2x49	T5/G5	87	3,7	1572	940

358xx modification **T5 PCc** – with stainless steel clips

PRIMA ABS

INDUSTRIAL WATERPROOF AND DUSTPROOF

fluorescent lighting fittings
chemically resistant modification

Use:
PRIMA ABS luminaires are evaluated for their resistance to an ambient containing fume of ammonia, lyes, alkalic compounds or hot water. Since such fume reduces the resistance of plastics it is necessary to keep a respect to fume´s concentration.
The luminaires are suitable for agricultural buildings, stables, car washes and warehouses without a danger of flammable gas and vapour explosion.
The body is made by injection of ABS.
The diffuser is made by injection of transparent acrylate.

t_a 45°C

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
35110	PRIMA 118 ABS AC	1x18	T8/G13	92	1,3	662	350
35120	PRIMA 136 ABS AC	1x36	T8/G13	92	2,2	1272	700
35130	PRIMA 158 ABS AC	1x58	T8/G13	90	2,9	1572	940
35140	PRIMA 218 ABS AC	2x18	T8/G13	85	2,0	662	350
35150	PRIMA 236 ABS AC	2x36	T8/G13	84	3,5	1272	700
35160	PRIMA 258 ABS AC	2x58	T8/G13	82	4,7	1572	940
	with electronic ballast						
35115	PRIMA 118 ABS AC E	1x18	T8/G13	92	1,0	662	350
35125	PRIMA 136 ABS AC E	1x36	T8/G13	92	1,8	1272	700
35135	PRIMA 158 ABS AC E	1x58	T8/G13	90	2,3	1572	940
35145	PRIMA 218 ABS AC E	2x18	T8/G13	85	1,6	662	350
35155	PRIMA 236 ABS AC E	2x36	T8/G13	84	2,7	1272	700
35165	PRIMA 258 ABS AC E	2x58	T8/G13	82	3,7	1572	940

352xx modification **ACc** – with stainless steel clips

t_a 35°C

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	with T5 electronic ballast – high efficiency range						
35510	PRIMA 114 ABS AC ET5	1x14	T5/G5	97	1,0	662	350
35520	PRIMA 128 ABS AC ET5	1x28	T5/G5	97	1,8	1272	700
35530	PRIMA 135 ABS AC ET5	1x35	T5/G5	96	2,3	1572	940
35540	PRIMA 214 ABS AC ET5	2x14	T5/G5	93	1,7	662	350
35550	PRIMA 228 ABS AC ET5	2x28	T5/G5	93	2,7	1272	700
35560	PRIMA 235 ABS AC ET5	2x35	T5/G5	92	3,7	1572	940
	with T5 electronic ballast – high output range						
35515	PRIMA 124 ABS AC ET5	1x24	T5/G5	91	1,0	662	350
35525	PRIMA 154 ABS AC ET5	1x54	T5/G5	90	1,8	1272	700
35535	PRIMA 180 ABS AC ET5	1x80	T5/G5	88	2,3	1572	940
35575	PRIMA 149 ABS AC ET5	1x49	T5/G5	91	2,3	1572	940
35545	PRIMA 224 ABS AC ET5	2x24	T5/G5	87	1,7	662	350
35555	PRIMA 254 ABS AC ET5	2x54	T5/G5	86	2,7	1272	700
35565	PRIMA 280 ABS AC ET5	2x80	T5/G5	84	3,7	1572	940
35585	PRIMA 249 ABS AC ET5	2x49	T5/G5	87	3,7	1572	940

356xx modification **T5 ACc** – with stainless steel clips

PRIMA t_a60

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

fluorescent lighting fittings for ***higher ambient temperature ta 60 °C***

Use:
PRIMA PC ta60 luminaires are suitable for illumination of indoor industrial areas with a maximum ambient temperature 60 °C.

In corrosive environment it is necessary to have respect to possible fumes which reduce the applicability of plastics.

Description:
The luminaires are wired with halogen free wire with temperature resistance up to +110 °C.
Higher temperature resistant electromagnetic ballast is used.

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	clips made of polyamid with fibreglass						
39310	PRIMA 118 PC ta60	1x18	T8/G13	89	1,3	662	350
39320	PRIMA 136 PC ta60	1x36	T8/G13	89	2,2	1272	700
39330	PRIMA 158 PC ta60	1x58	T8/G13	87	2,9	1572	940
39340	PRIMA 218 PC ta60	2x18	T8/G13	82	2,0	692	350
39350	PRIMA 236 PC ta60	2x36	T8/G13	81	3,5	1272	700
39360	PRIMA 258 PC ta60	2x58	T8/G13	79	4,7	1572	940
	clips made of stainless steel						
39410	PRIMA 118 PCc ta60	1x18	T8/G13	89	1,3	662	350
39420	PRIMA 136 PCc ta60	1x36	T8/G13	89	2,2	1272	700
39430	PRIMA 158 PCc ta60	1x58	T8/G13	87	2,9	1572	940
39440	PRIMA 218 PCc ta60	2x18	T8/G13	82	2,0	662	350
39450	PRIMA 236 PCc ta60	2x36	T8/G13	81	3,5	1272	700
39460	PRIMA 258 PCc ta60	2x58	T8/G13	79	4,7	1572	940

PRIMA LED

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

fluorescent lighting fittings with LEDs

Use:

Fluorescent PRIMA LED luminaires are suitable for illumination of areas with low ambient temperature. The lifetime of LEDs is not reduced with often switching.

Description:

The luminaires are equipped with high efficiency LED tubes (Ø 28 mm) with long service life.
The tubes have cooling aluminium profile and opal plastic cover.
Lampholder: GU10.

Order code	Type	Light sources	Luminous flux	Number of LEDs	Net weight	Dimensions A	D
		W	lm		kg	mm	
	with LEDs 6000 K daylight						
37313	PRIMA PC LED 110	1x10	735	128	0,7	662	350
37323	PRIMA PC LED 120	1x20	1534	256	1,5	1272	700
37333	PRIMA PC LED 125	1x25	1800	320	2,0	1572	940
37343	PRIMA PC LED 210	2x10	1470	256	1,3	662	350
37353	PRIMA PC LED 220	2x20	3068	512	2,4	1272	700
37363	PRIMA PC LED 225	2x25	3600	640	3,4	1572	940

373x1 modification LED 3000 K – warm white
373x2 modification LED 4000 K – cool white
374xx modification with stainless steel clips

PRIMA t_a-40 Polar

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

fluorescent lighting fittings

for ***extremely low ambient temperature up to -40 ℃***

Use:

Fluorescent luminaires PRIMA PC ta-40 Polars are suitable for illumination of areas with extremely low ambient temperature up to -40 °C.

Description:

The luminaires are equipped with glow switch starters for igniting fluorescent lamps in arctic conditions.

It is necessary to use special double-tube fluorescent tubes (Philips Master Xtra Polar or Aura Ultimate Thermo) to be able to achieve the requested level of luminous flux. Fluorescent tube diameter is 38 mm or 32 mm.

Order code	Type	Light sources		Luminous efficiency	Net weight	Dimensions A	D
		W		%	kg	mm	
	modification for extremely low ambient temperature to -40 ℃						
38310	PRIMA 118 PC Polar ta-40	1x18	T8/G13	89	1,3	662	350
38320	PRIMA 136 PC Polar ta-40	1x36	T8/G13	89	2,2	1272	700
38330	PRIMA 158 PC Polar ta-40	1x58	T8/G13	87	2,9	1572	940
38340	PRIMA 218 PC Polar ta-40	2x18	T8/G13	82	2,0	692	350
38350	PRIMA 236 PC Polar ta-40	2x36	T8/G13	81	3,5	1272	700
38360	PRIMA 258 PC Polar ta-40	2x58	T8/G13	79	4,7	1572	940

384xx modification with stainless steel clips

IP65

230 V 50 Hz

F

Ø 38 G 13

Ø 32 G 13

1-2,5 mm²

t 110 °C

t_a -40°C

PC 850°C

1F

3F

VVG

PRIMA-Ex

INDUSTRIAL WATERPROOF, DUSTPROOF AND IMPACT RESISTANT

fluorescent lighting fittings suitable for ambient with **a danger of explosion**

Use:

PRIMA…PCc Ex industrial waterproof and dustproof lighting fittings with higher impact resistance are suitable for illumination of areas with a danger of flammable dust, gas and vapour explosion.
The above mentioned ambient corresponds to the European Union directive No.: 94/9/EC (NV 23/2003 Sb.): Ex II 3GD Ex nA II T4-T5, T_{max} - see table on the next page.

Lighting fittings are designed for ambient temperature from -20 °C to +40 °C

The luminaires are certified by FTZÚ Ostrava – Radvanice.
Certificate No: FTZÚ 08 ATEX 0168X
(Installed luminaire has to be protected from mechanical damage)

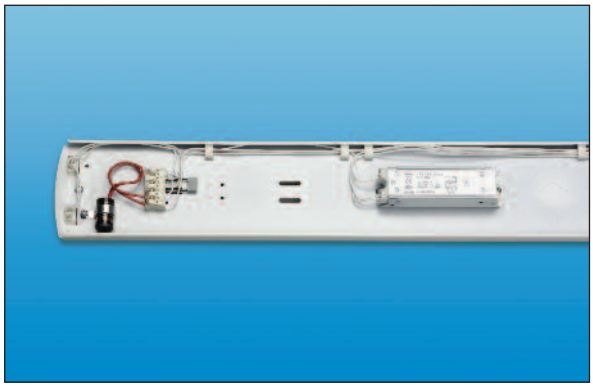
Description, optics:

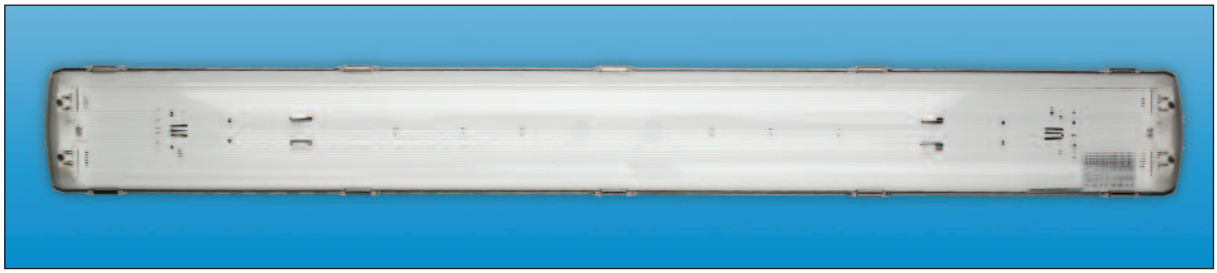
The body is made by injection of impact and heat resistant polycarbonate of grey color.
There are two 20,5 mm holes for Pg 13,5 cable glands in the body. Fixing of the body with diffuser is solved with stainless steel clips. The luminaire is provided with a foamed Polyurethan sealing injected directly to the body.

The **diffuser** is made by injection of transparent stabilized polycarbonate (PC) with a high impact resistance.

The **reflector** is made of the steel sheet, powder coated with white colour. Electric equipment of the lighting fittings is fixed on the reflector.
Polished aluminium parabolic reflector (PAR) can be delivered on demand.

The way of fitting's suspension:
- directly on a surface (also flammable) using stainless steel brackets
- using stainless steel hooks delivered as standard accessories





Electric equipment modifications suitable for the ambient with danger of explosion

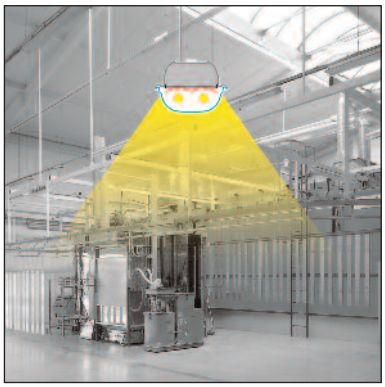
- **with magnetic ballast**

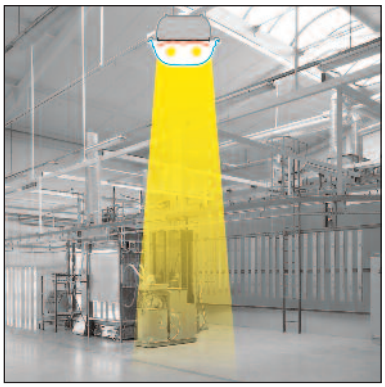
  There are mounted B1 class magnetic ballasts on the reflector, 3 pole (resp. 5 pole) terminal block for connecting supply cable with a wire up to 2,5mm^2 and another 2 pole connecting terminal block.
  The reflector is also provided with shake resistant lampholders. By the use of a special metal holder, an electronic starter (Pulsestarter EFS in modification for EEx nA II) is fixed to the reflector.
  The lighting fitting can be additionally compensated with DNA capacitor.
- **with electronic ballast type Osram, Helvar, Philips or Vossloh-Schwabe.**

The connection of electric parts is accomplished with halogen free wire with temperature resistance from -30 °C to +100 °C.
On demand, the lighting fittings can be 1 phase or 3 phase through wired.

Order code	Type	Light sources	Temperature class	Max. surface temperature	Luminous efficiency	Net weight	Dimensions A	D
		W		°C	%	kg	mm	
	with magnetic ballast							
39010	PRIMA 118 PCc Ex	1x18	T4	67	89	1,4	662	350
39020	PRIMA 136 PCc Ex	1x36	T4	67	89	2,3	1272	700
39030	PRIMA 158 PCc Ex	1x58	T4	67	87	3,0	1572	940
39040	PRIMA 218 PCc Ex	2x18	T4	67	82	2,1	662	350
39050	PRIMA 236 PCc Ex	2x36	T4	67	81	3,6	1272	700
39060	PRIMA 258 PCc Ex	2x58	T4	67	79	4,8	1572	940
	with electronic ballast							
39025	PRIMA 136 PCc Ex E	1x36	T5	53	89	2,0	1272	700
39035	PRIMA 158 PCc Ex E	1x58	T5	60	87	2,6	1572	940
39055	PRIMA 236 PCc Ex E	2x36	T5	53	81	3,0	1272	700
39065	PRIMA 258 PCc Ex E	2x58	T6	60	79	4,0	1572	940

ACCESSORIES FOR PRIMA





white reflector
for suspension height up to 6 m

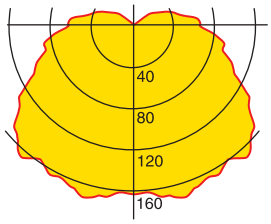
polished Al reflector
for suspension height up to 7 m

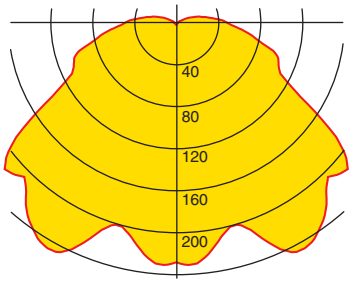
parabolic reflector PAR 5. – T8
parabolic reflector PAR 6. – T5

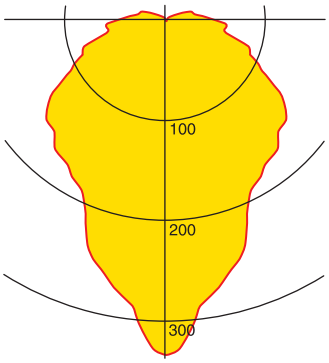
for suspension height 6 - 9 m

parabolic reflector PAR-H 7. – T5

for suspension height 7 – 11 m

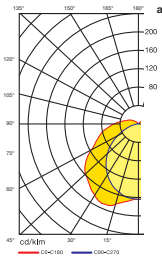






PRIMA 236 AC LA

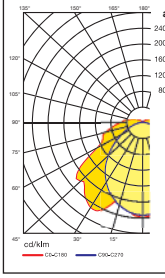
η = 82 % I_{max} = 188.7 cd/klm γ = 20°



angle [°]	C0-180	C90-270
0.0	163.8	163.8
10.0	171.9	161.1
20.0	188.7	152.2
30.0	188.3	142.5
40.0	177.1	129.5
50.0	163.6	117.3
60.0	146.1	99.8
70.0	111.4	71.4
80.0	89.2	36.9
90.0	68.4	11.9
100.0	48.2	5.1
110.0	31.3	3.4
120.0	22.0	2.1
130.0	13.9	1.6
140.0	7.3	1.6
150.0	1.2	0.0
160.0	0.0	0.0
170.0	0.0	0.0
180.0	0.0	0.0

PRIMA 254 PC PAR 6.1 ET5

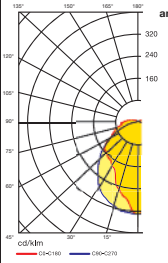
η = 88 % I_{max} = 253 cd/klm γ = 30°



angle [°]	C0-180	C90-270
0.0	233	233
10.0	220	226
20.0	214	208
30.0	253	181
40.0	230	147
50.0	220	105
60.0	141	63
70.0	107	32
80.0	80	12
90.0	54	3
100.0	37	3
110.0	24	2
120.0	14	2
130.0	7	2
140.0	4	2
150.0	0	0
160.0	0	0
170.0	0	0
180.0	0	0

PRIMA 280 PC PAR-H 7.2 ET5

η = 86 % I_{max} = 331.9 cd/klm γ = 0°

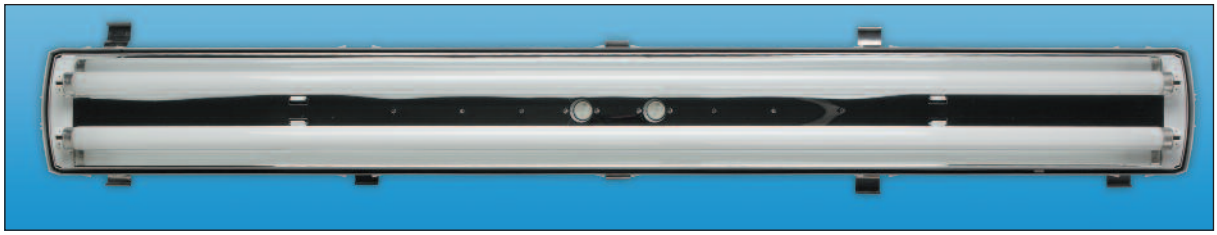


angle [°]	C0-180	C90-270
0	331,8	331,9
10	272,0	321,8
20	246,6	277,3
30	187,1	239,4
40	162,2	205,5
50	141,8	160,4
60	125,6	108,8
70	86,3	73,1
80	54,0	28,0
90	40,3	10,9
100	27,7	4,6
110	19,8	2,2
120	7,6	1,1
130	4,8	0,6
140	1,9	0,3
150	0,9	0,0
160	0,8	0,0
170	0,3	0,0
180	0,0	0,0

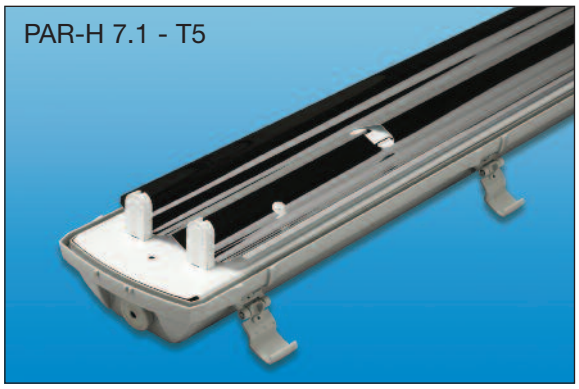
Accessories for PRIMA

Order code	Type	
11951	PAR 5.1	polished aluminium parabolic reflector for PRIMA 236
11952	PAR 5.2	polished aluminium parabolic reflector for PRIMA 258
11953	PAR 5.3	polished aluminium parabolic reflector for PRIMA 136
11954	PAR 5.4	polished aluminium parabolic reflector for PRIMA 158
11961	PAR 6.1	polished aluminium parabolic reflector for PRIMA T5 228/254
11962	PAR 6.2	polished aluminium parabolic reflector for PRIMA T5 235/249/280
11963	PAR 6.3	polished aluminium parabolic reflector for PRIMA T5 128/154
11964	PAR 6.4	polished aluminium parabolic reflector for PRIMA T5 135/149/180
11971	PAR-H 7.1	polished aluminium parabolic reflector for PRIMA T5 228/254
11972	PAR-H 7.2	polished aluminium parabolic reflector for PRIMA T5 235/249/280

PAR 5.1, 5.3 - T8



PAR-H 7.1 - T5



PAR 6.1 - T5

LA - T5
PAR-H 7.1 - T5