

# FUTURA ES



**172**  
lm/W

## ... Energy Saver.

### USE

The light fitting is suitable for industrial indoor and outdoor roofed spaces, warehouses, sports areas, workshops, garages, transport terminals, utility structures and laboratories without a danger of explosion of gas, dust and combustible fumes.

The light fitting is resistant to dust, moisture and spouting water. The body and the diffuser made of polycarbonate (PC) have the increased resistance against deformation and impact.

(It is necessary to consider exhalation in the air which can reduce the usability of the plastic and aluminium at installations in an aggressive environment, see also page 367).

### ADVANTAGES

- Light fitting protection **IP66**
- Maximum ambient temperature up to **t<sub>a</sub> = 50 °C**
- Lifetime: 50,000 hours / L90B10
- Diffuser: translucent polycarbonate (PC) = high mechanical resistance
- Body: grey polycarbonate with Al coolers (PC Al) = high mechanical resistance
- Up to 50 % lower electricity consumption when compared to tubes T5
- In DALI version possibility of constant luminous flux for whole lifetime (CLO)
- Constant luminous flux even in ambient temperature of -25 °C
- Standard model - CRI > 80: 4000 K
- At request CRI > 80: 3000 K, 5000 K, 6500 K
- It can be delivered in dimmable or emergency version
- Through-wiring of up to 10 wires at body
- Certification: EPD, ENEC, CB, HACCP

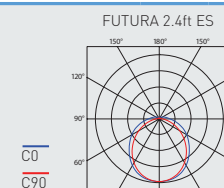
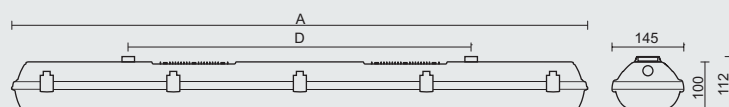


## FUTURA ES PC Al, PCc Al



## TECHNICAL DESCRIPTION

- Light fitting protection: IP66
- Maximum ambient temperature:  $t_a = 50^\circ\text{C}$ , Maximum ambient temperature:  $t_a = 0-25^\circ\text{C}$  (version with emergency back-up source for 1 or 3 hours; M1h, M3h)
- Maximum system efficacy: 172 lm/W
- The watt and lumen values can vary by  $\pm 7,5\%$
- Standard model - CRI > 80: 4000 K
- MacAdam = 3 SDCM
- Lifetime: 50,000 hours / L90B10
- Diffuser: translucent polycarbonate (PC), UV stable, impact-resistant
- Body: grey polycarbonate with Al coolers (PC Al), UV stable, impact-resistant
- Reflector: steel sheet, white colour (RAL 9003)
- Clips: polyamide + 15 % glass fibre or stainless steel + polyamide
- Sealing: polyurethane (PUR), foamed body groove
- Cable glands: screwed PG 13.5
- Distance part: polyamide + 10 % glass fibre
- Terminal block: screwless, three-pole (basic version)
- Installation: package contains stainless hooks and stainless brackets
- Electric equipment: LED modules, current driver or current driver DALI



Type	Max. ambient temperature [°C]	Luminous flux of LED modules [lm]	Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]	UGR Longitudinal/transverse	Net weight [kg]	A [mm]	D [mm]
For ambient temperature $t_a = 50^\circ\text{C}$ - body: grey polycarbonate with Al coolers - diffuser: translucent polycarbonate									
FUTURA 2.2ft ES PC Al 2600/840	50	2690	2530	15,3	165	23.2 / 21.3	1,45	612	475
FUTURA 2.2ft ES PC Al 3200/840	50	3190	3000	18,2	165	23.9 / 21.9	1,45	612	475
FUTURA 2.2ft ES PC Al 4400/840	45	4380	4120	24,6	167	24.9 / 23.1	1,45	612	475
FUTURA 2.4ft ES PC Al 5200/840	50	5300	4980	28,9	172	23.4 / 21.7	2,45	1172	700
FUTURA 2.4ft ES PC Al 6400/840	50	6410	6030	35,2	171	24.1 / 22.3	2,45	1172	700
FUTURA 2.4ft ES PC Al 8800/840	45	9110	8560	50,4	170	25.3 / 23.5	2,45	1172	700
FUTURA 2.4ft ES PC Al 12800/840	35	14490	13620	80,1	170	26.8 / 25.1	2,65	1172	700
FUTURA 2.5ft ES PC Al 6500/840	50	6920	6500	37,7	172	23.5 / 21.8	2,95	1452	940
FUTURA 2.5ft ES PC Al 8000/840	50	8150	7660	45,1	170	24.1 / 22.4	2,95	1452	940
FUTURA 2.5ft ES PC Al 11000/840	45	12560	11810	68,9	171	25.7 / 24.0	2,95	1452	940
FUTURA 2.5ft ES PC Al 16000/840	35	17980	16900	99,3	170	26.8 / 25.1	3,25	1452	940

10020 FUTURA 2.2ft ES PC Al 3200/840 = suitable replacement for T8 fl. tube light fitting PRIMA 218 - 2x18W

10050 FUTURA 2.4ft ES PC Al 6400/840 = suitable replacement for T8 fl. tube light fitting PRIMA 236 - 2x36W

10090 FUTURA 2.5ft ES PC Al 8000/840 = suitable replacement for T8 fl. tube light fitting PRIMA 258 - 2x58W

## FUTURA ES PC Al

Non-dimmable driver - plastic clips

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
10010	FUTURA 2.2ft ES PC Al 2600/840	x	x	10014	10015	x	x
10020	FUTURA 2.2ft ES PC Al 3200/840	x	x	10024	10025	x	x
10030	FUTURA 2.2ft ES PC Al 4400/840	x	x	10034	10035	x	x
10040	FUTURA 2.4ft ES PC Al 5200/840	10041	10043	10044	10045	10046	10047
10050	FUTURA 2.4ft ES PC Al 6400/840	10051	10053	10054	10055	10056	10057
10060	FUTURA 2.4ft ES PC Al 8800/840	10061	10063	10064	10065	10066	10067
10070	FUTURA 2.4ft ES PC Al 12800/840	10071	10073	x	x	x	x
10080	FUTURA 2.5ft ES PC Al 6500/840	10081	10083	10084	10085	10086	10087
10090	FUTURA 2.5ft ES PC Al 8000/840	10091	10093	10094	10095	10096	10097
10100	FUTURA 2.5ft ES PC Al 11000/840	10101	10103	10104	10105	10106	10107
10110	FUTURA 2.5ft ES PC Al 16000/840	10111	10113	x	x	x	x

## FUTURA ES PCc Al

Non-dimmable driver - stainless clips (c)

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
10120	FUTURA 2.2ft ES PCc Al 2600/840	x	x	10124	10125	x	x
10130	FUTURA 2.2ft ES PCc Al 3200/840	x	x	10134	10135	x	x
10140	FUTURA 2.2ft ES PCc Al 4400/840	x	x	10144	10145	x	x
10150	FUTURA 2.4ft ES PCc Al 5200/840	10151	10153	10154	10155	10156	10157
10160	FUTURA 2.4ft ES PCc Al 6400/840	10161	10163	10164	10165	10166	10167
10170	FUTURA 2.4ft ES PCc Al 8800/840	10171	10173	10174	10175	10176	10177
10180	FUTURA 2.4ft ES PCc Al 12800/840	10181	10183	x	x	x	x
10190	FUTURA 2.5ft ES PCc Al 6500/840	10191	10193	10194	10195	10196	10197
10200	FUTURA 2.5ft ES PCc Al 8000/840	10201	10203	10204	10205	10206	10207
10210	FUTURA 2.5ft ES PCc Al 11000/840	10211	10213	10214	10215	10216	10217
10220	FUTURA 2.5ft ES PCc Al 16000/840	10221	10223	x	x	x	x

Example of type marking: 10177 = FUTURA 2.4ft ES PCc Al 8800/840 3F M3h

## FUTURA ES PC Al DALI

Digital dimmable driver DALI - plastic clips

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
10230	FUTURA 2.2ft ES PC Al 2600/840 DALI	x	x	10234	10235	x	x
10240	FUTURA 2.2ft ES PC Al 3200/840 DALI	x	x	10244	10245	x	x
10250	FUTURA 2.2ft ES PC Al 4400/840 DALI	x	x	10254	10255	x	x
10260	FUTURA 2.4ft ES PC Al 5200/840 DALI	10261	10263	10264	10265	10266	10267
10270	FUTURA 2.4ft ES PC Al 6400/840 DALI	10271	10273	10274	10275	10276	10277
10280	FUTURA 2.4ft ES PC Al 8800/840 DALI	10281	10283	10284	10285	10286	10287
10290	FUTURA 2.4ft ES PC Al 12800/840 DALI	10291	10293	x	x	x	x
10300	FUTURA 2.5ft ES PC Al 6500/840 DALI	10301	10303	10304	10305	10306	10307
10310	FUTURA 2.5ft ES PC Al 8000/840 DALI	10311	10313	10314	10315	10316	10317
10320	FUTURA 2.5ft ES PC Al 11000/840 DALI	10321	10323	10324	10325	10326	10327
10330	FUTURA 2.5ft ES PC Al 16000/840 DALI	10331	10333	x	x	x	x

## FUTURA ES PCc Al DALI

Digital dimmable driver DALI - stainless clips (c)

Code	Type	1F	3F	M1h	M3h	3F M1h	3F M3h
10340	FUTURA 2.2ft ES PCc Al 2600/840 DALI	x	x	10344	10345	x	x
10350	FUTURA 2.2ft ES PCc Al 3200/840 DALI	x	x	10354	10355	x	x
10360	FUTURA 2.2ft ES PCc Al 4400/840 DALI	x	x	10364	10365	x	x
10370	FUTURA 2.4ft ES PCc Al 5200/840 DALI	10371	10373	10374	10375	10376	10377
10380	FUTURA 2.4ft ES PCc Al 6400/840 DALI	10381	10383	10384	10385	10386	10387
10390	FUTURA 2.4ft ES PCc Al 8800/840 DALI	10391	10393	10394	10395	10396	10397
10400	FUTURA 2.4ft ES PCc Al 12800/840 DALI	10401	10403	x	x	x	x
10410	FUTURA 2.5ft ES PCc Al 6500/840 DALI	10411	10413	10414	10415	10416	10417
10420	FUTURA 2.5ft ES PCc Al 8000/840 DALI	10421	10423	10424	10425	10426	10427
10430	FUTURA 2.5ft ES PCc Al 11000/840 DALI	10431	10433	10434	10435	10436	10437
10440	FUTURA 2.5ft ES PCc Al 16000/840 DALI	10441	10443	x	x	x	x

Example of type marking: 10426 = FUTURA 2.5ft ES PCc Al 8000/840 DALI **3F M1h**

## LEGEND

<b>1F</b>	1-phase 3 core through-wiring in the luminaire
<b>3F</b>	3-phase 5 core through-wiring in the luminaire
<b>M1h</b>	emergency back-up source with 1 hour operating time for maintained emergency illumination
<b>M3h</b>	emergency back-up source with 3 hour operating time for maintained emergency illumination
<b>3F Mxh</b>	3-phase 5 core through-wiring in the luminaire (L3 used for emergency unit unswitched power supply)

<b>DALI</b>	version with digital dimmable driver DALI
<b>DALI 1F</b>	1-phase 5 core through-wiring in the luminaire
<b>DALI 3F</b>	3-phase 7 core through-wiring in the luminaire
<b>DALI 3F Mxh</b>	3-phase 7 core through-wiring in the luminaire (L3 used for emergency unit unswitched power supply)

**LIGHT FITTING ATTACHMENT**

- a) Directly to a ceiling or a wall with the use of screws and stainless brackets
- b) Suspension with the use of stainless hooks
- c) Attachment with the use of side hangers to the wall - is not included in accessories

**LIGHT FITTING DETAILED VIEW**

FUTURA ES

