FUTURA ES



... Energy Saver, MultiLumen.

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.

Emissions in the environment of use may reduce the usability of the plastics; for more information see page 421.

ADVANTAGES

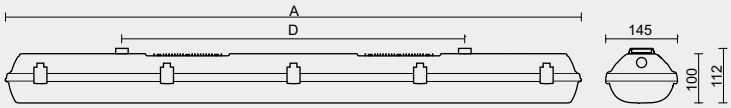
- Light fitting protection **IP66**
- Maximum ambient temperature up to t_a **= 50 °C**
- Lifetime: 50,000 hours / L90B10
- Lifetime: 100,000 hours / L80B10
- Diffuser: translucent polycarbonate (PC) = high mechanical resistance
- Body: grey polycarbonate with Al coolers (PC Al) = high mechanical resistance
- Up to 50 % lower electricity consumption when compared to tubes T5
- In DALI version possibility of constant luminous flux for whole lifetime (CLO)
- **MultiLumen (ML)** function enables simple switching between up to four luminous fluxes via driver's DIP switch
- 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, CB, HACCP

FUTURA ES PC Al, PCc Al

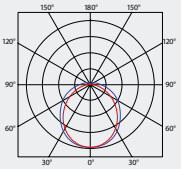


TECHNICAL DESCRIPTION

- Light fitting protection: IP66
- Maximum ambient temperature: t_a = 50 °C, Maximum ambient temperature: t_a = 0-40 °C (version with emergency back-up M3hAt)
- Maximum system efficacy: 185 lm/W
- The watt and lumen values can vary by ± 7,5 %
- Standard model - CRI > 80: 4000 K
- MacAdam = 3 SDCM
- Lifetime: 50,000 hours / L90B10
- Lifetime: 100,000 hours / L80B10
- **MultiLumen (ML):** luminous flux variable in up to 4 steps. In the standard version preset maximum luminous flux.
- 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



FUTURA 2.4ft ES



Type	Max. ambient temperature [°C]	Luminous flux of LED modules [lm]	Preselected Step 1 of MultiLumen function			Net weight [kg]	A [mm]	D [mm]
			Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]			
For ambient temperature t_a = 50 °C - body: grey polycarbonate with Al coolers - diffuser: translucent polycarbonate								
FUTURA 2.2ft ES PC Al 3200/840	50	3470	3230	18,1	178	1,45	612	475
FUTURA 2.2ft ES PC Al 4400/840 *	45	4700	4370	24,1	181	1,45	612	475
FUTURA 2.4ft ES PC Al 6400/840	50	6600	6140	34,3	179	2,45	1172	700
FUTURA 2.4ft ES PC Al 8800/840 *	45	9100	8460	47,0	180	2,45	1172	700
FUTURA 2.4ft ES PC Al 12800/840	40	13014	12100	66,4	182	2,65	1172	700
FUTURA 2.4ft ES PC Al 14000/840	40	14780	13750	76,1	181	2,65	1172	700
FUTURA 2.5ft ES PC Al 8000/840	50	8034	7470	40,7	184	2,95	1452	940
FUTURA 2.5ft ES PC Al 11000/840 *	45	11120	10340	56,7	182	2,95	1452	940
FUTURA 2.5ft ES PC Al 16000/840	40	16150	15020	81,3	185	3,25	1452	940
FUTURA 2.5ft ES PC Al 18000/840	40	18030	16770	93,9	179	3,25	1452	940
FUTURA 2.5ft ES PC Al 20000/840	40	20110	18700	107,6	174	3,25	1452	940
FUTURA 2.5ft ES PC Al 22000/840	35	22180	20630	119,3	173	3,45	1452	940

*) Also available with MultiLumen function:

Type	MultiLumen function								
	Step 2			Step 3			Step 4		
	Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]	Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]	Luminous flux of light fitting [lm]	Power consumption [W]	System efficacy [lm/W]
FUTURA 2.2ft ES PC Al 4400/840 ML	3800	21,4	178	3230	18,1	178	2590	14,6	177
FUTURA 2.4ft ES PC Al 8800/840 ML	7320	40,5	181	6140	34,3	179	4900	27,7	177
FUTURA 2.5ft ES PC Al 11000/840 ML	8920	48,6	184	7470	40,7	184	6020	32,9	183

10020 FUTURA 2.2ft ES PC Al 3200/840 = suitable replacement for T8 fl. tube light fitting PRIMA 218 – 2×18 W
10050 FUTURA 2.4ft ES PC Al 6400/840 = suitable replacement for T8 fl. tube light fitting PRIMA 236 – 2×36 W
10090 FUTURA 2.5ft ES PC Al 8000/840 = suitable replacement for T8 fl. tube light fitting PRIMA 258 – 2×58 W

FUTURA ES PC Al

Non-dimmable driver - plastic clips

Code	Type	1F	3F	M3hAt	3F M3hAt
10020	FUTURA 2.2ft ES PC Al 3200/840	x	x	109119	x
10030	FUTURA 2.2ft ES PC Al 4400/840 ML	x	x	109120	x
10050	FUTURA 2.4ft ES PC Al 6400/840	10051	10053	109122	109128
10060	FUTURA 2.4ft ES PC Al 8800/840 ML	10061	10063	109123	109129
10070	FUTURA 2.4ft ES PC Al 12800/840	10071	10073	x	x
111767	FUTURA 2.4ft ES PC Al 14000/840	111771	111775	x	x
10090	FUTURA 2.5ft ES PC Al 8000/840	10091	10093	109125	109131
10100	FUTURA 2.5ft ES PC Al 11000/840 ML	10101	10103	109126	109132
10110	FUTURA 2.5ft ES PC Al 16000/840	10111	10113	x	x
111768	FUTURA 2.5ft ES PC Al 18000/840	111772	111776	x	x
111769	FUTURA 2.5ft ES PC Al 20000/840	111773	111777	x	x
111770	FUTURA 2.5ft ES PC Al 22000/840	111774	111778	x	x

FUTURA ES PCc Al

Non-dimmable driver - stainless clips (c)

Code	Type	1F	3F	M3hAt	3F M3hAt
10130	FUTURA 2.2ft ES PCc Al 3200/840	x	x	109134	x
10140	FUTURA 2.2ft ES PCc Al 4400/840 ML	x	x	109135	x
10160	FUTURA 2.4ft ES PCc Al 6400/840	10161	10163	109137	109143
10170	FUTURA 2.4ft ES PCc Al 8800/840 ML	10171	10173	109138	109144
10180	FUTURA 2.4ft ES PCc Al 12800/840	10181	10183	x	x
111821	FUTURA 2.4ft ES PCc Al 14000/840	111825	111829	x	x
10200	FUTURA 2.5ft ES PCc Al 8000/840	10201	10203	109140	109146
10210	FUTURA 2.5ft ES PCc Al 11000/840 ML	10211	10213	109141	109147
10220	FUTURA 2.5ft ES PCc Al 16000/840	10221	10223	x	x
111822	FUTURA 2.5ft ES PCc Al 18000/840	111826	111830	x	x
111823	FUTURA 2.5ft ES PCc Al 20000/840	111827	111831	x	x
111824	FUTURA 2.5ft ES PCc Al 22000/840	111828	111832	x	x

FUTURA ES PC Al DALI

Digital dimmable driver DALI - plastic clips

Code	Type	1F	3F	M3hAt	3F M3hAt
10240	FUTURA 2.2ft ES PC Al 3200/840 DALI	x	x	109149	x
10250	FUTURA 2.2ft ES PC Al 4400/840 DALI	x	x	109150	x
10270	FUTURA 2.4ft ES PC Al 6400/840 DALI	10271	10273	109152	109158
10280	FUTURA 2.4ft ES PC Al 8800/840 DALI	10281	10283	109153	109159
10290	FUTURA 2.4ft ES PC Al 12800/840 DALI	10291	10293	x	x
111779	FUTURA 2.4ft ES PC Al 14000/840 DALI	111783	111787	x	x
10310	FUTURA 2.5ft ES PC Al 8000/840 DALI	10311	10313	109155	109161
10320	FUTURA 2.5ft ES PC Al 11000/840 DALI	10321	10323	109156	109162
10330	FUTURA 2.5ft ES PC Al 16000/840 DALI	10331	10333	x	x
111780	FUTURA 2.5ft ES PC Al 18000/840 DALI	111784	111788	x	x
111781	FUTURA 2.5ft ES PC Al 20000/840 DALI	111785	111789	x	x
111782	FUTURA 2.5ft ES PC Al 22000/840 DALI *	111786	111790	x	x

FUTURA ES PCc Al DALI

Digital dimmable driver DALI - stainless clips (c)

Code	Type	1F	3F	M3hAt	3F M3hAt
10350	FUTURA 2.2ft ES PCc Al 3200/840 DALI	x	x	109164	x
10360	FUTURA 2.2ft ES PCc Al 4400/840 DALI	x	x	109165	x
10380	FUTURA 2.4ft ES PCc Al 6400/840 DALI	10381	10383	109167	109173
10390	FUTURA 2.4ft ES PCc Al 8800/840 DALI	10391	10393	109168	109174
10400	FUTURA 2.4ft ES PCc Al 12800/840 DALI	10401	10403	x	x
111833	FUTURA 2.4ft ES PCc Al 14000/840 DALI	111837	111841	x	x
10420	FUTURA 2.5ft ES PCc Al 8000/840 DALI	10421	10423	109170	109176
10430	FUTURA 2.5ft ES PCc Al 11000/840 DALI	10431	10433	109171	109177
10440	FUTURA 2.5ft ES PCc Al 16000/840 DALI	10441	10443	x	x
111834	FUTURA 2.5ft ES PCc Al 18000/840 DALI	111838	111842	x	x
111835	FUTURA 2.5ft ES PCc Al 20000/840 DALI	111839	111843	x	x
111836	FUTURA 2.5ft ES PCc Al 22000/840 DALI *	111840	111844	x	x

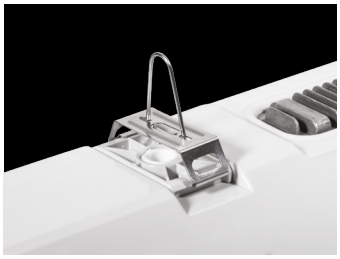
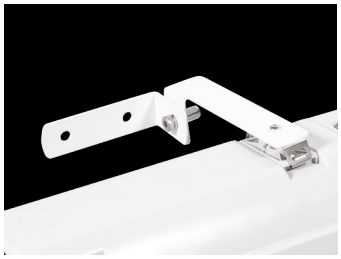
*) The FUTURA 2.5ft ES 22000/840 DALI luminaire contains 2pcs DALI drivers, so it has 2 DALI control addresses.

LEGEND

1F - 1-phase 3 core through-wiring in the luminaire
3F - 3-phase 5 core through-wiring in the luminaire
M3hAt - emergency back-up source with 3 hour operating time for maintained emergency illumination with battery autotest
3F M3hAt - 3-phase 5 core through-wiring in the luminaire (L3 used for emergency unit unswitched power supply)
DALI - version with digital dimmable driver DALI
DALI 1F - 1-phase 5 core through-wiring in the luminaire
DALI 3F - 3-phase 7 core through-wiring in the luminaire
DALI 3F M3hAt - 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

