

- Ingress & impact resistant
 Progressive, modular lightengine design featuring
 European, long-life SMDs
- CE, RoHS, CB, ELT, & DLC international product marks
- The most competitive, high-end solution for projects worldwide



Forsyth 2 Series

Multi-Purpose High Bays & Floodlights

ENGINEERING CMSPECI52REV4

ENGINEERING CMSPECI52REV4

ELECTRICAL CMSPECI52REV4

ELECTRICAL CMSPECI52REV4



Technical Specifications Summary









Performance Summary:						
Code (Series-Wattage/Size)	FOR2-100	FOR2-150	FOR2-200	FOR2-300	FOR2-450	
Nominal Power	100W	150W	200W	300W	450W	
Luminaire Efficacy @ CRI>70, 4000K/5000K CCT	140lm/W	140lm/W	140lm/W	140lm/W	140lm/W	
Lumen Output @ CRI>70, 4000K/5000K CCT	14,000lm	21,000lm	28,000lm	42,000lm	63,000lm	
Lumen Maintenance (TM21 Calculated)		L80B1	0 ≥82,000 hours @ 25°C A	mbient		
Certification			CE, RoHS, CB, ELT, DLC			
Product Warranty			5 Years			
Light Source and Photometric P	arameters:					
Chip Brand, Model, & Size			Philips Lumileds			
Chip Efficacy @ CRI>70, 5000K CCT			169lm/W @ 122mA, 25°C			
Light Emmission			Direct			
сст		50	000K, (3000K, 4000K, 6000	OK)		
CRI			≥70Ra, (≥80Ra optional)			
SDCM			≤5			
Diffusers			Clear			
Symmetric Light Distribution	90°, 110° (Standard), 150°					
Asymmetric Light Distribution		A1 (30°x	100°), A2 (60°x100°), 1S, 2	S, 2M, 4S		
Electrical Parameters1:						
System Operating Power	100W	150W	200W	300W	450W	
Driver Brand		Meanwell (l	Inventronics DALI-dimmir	ng optional)		
Driver Model	HLG-150	HLG-150	HLG-240	HLG-150	HLG-150	
Typical Driver Lifetime (Case Temp.)		100,000 ho	urs @Tc 25°C 50,000 hou	rs @Tc 80°C		
Typical Driver Lifetime	100,000) hours @25°C Ambient 8	0,000 hours @70°C Ambie	ent 43,000 hours @80°C A	mbient	
Input Voltage			220-240VAC			
Input Frequency			50-60Hz			
Qty of Drivers per Light	1	1	1	2	3	
Inrush Current Per Driver @ 230VAC measured at 50% Ipeak (Peak/Duration)	65A/425µs	65A/445µs	75A/570μs	75A/570µs	75A/570μs	
Recommended Lights per Circuit (16A Type C MCB)	7	7	4	2	1	
Power Factor			>0.95			
THD			<15% (220-240VAC)			
Insulation Class	Class I					
Surge Protection/Fusing	2kV line-line, 4kV line-earth					
Environmental Parameters:						
IP Rating			IP66			
IK Rating	IK10					
Ambient Usage Tolerance	-30°C to 45°C					
Ambient Storage Tolerance	-40°C to 80°C					
Driver automatic turn-off temperature		90°C Tc - Driv	er Powers OFF to protect	the LED Load		

Ambient Humidity Tolerance

15% to 95% RH



Technical Specifications Summary

Physical/Mechanical Parameters: roduct Dimensions: LxWxH (mm) 330 x 365 x 224 435 x 365 x 224 540 x 365 x 224 750 x 365 x 224 1065 x 365 x 224 tty of LED Chips 112 168 224 336 504 9 lectrical Connection 1000mm 3-Core Cable							
roduct Dimensions: LxWxH (mm) 330 x 365 x 224 435 x 365 x 224 540 x 365 x 224 750 x 365 x 224 1065 x 365 x 224 tty of LED Chips 112 168 224 336 504 100 mty of Modules 2 3 4 6 9 lectrical Connection 1000mm 3-Core Cable 1000mm 3	Code (Series-Wattage/Size)	FOR2-100	FOR2-150	FOR2-200	FOR2-300	FOR2-450	
ty of LED Chips 112 168 224 336 504 ty of Modules 2 3 4 6 9 lectrical Connection 1000mm 3-Core Cable ixture Weight ² 6.4kg 7.7kg 9.1kg 14.9kg 21.0kg ixture Primary Material(s) ixture Primary Material(s) ixture Finish Painted lens(es) Materials UV Stabilised Polycarbonate Dimming/Controls Parameters: imming Options 1-10V, DALI uilt-In Controls Photocell, PIR Sensor compatible intelligent lighting systems Diptions/Accessories: Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount liscellaneous Accessories Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Physical/Mechanical Parameters:						
lectrical Connection 1000mm 3-Core Cable	Product Dimensions: LxWxH (mm)	330 x 365 x 224	435 x 365 x 224	540 x 365 x 224	750 x 365 x 224	1065 x 365 x 224	
lectrical Connection 1000mm 3-Core Cable	Qty of LED Chips	112	168	224	336	504	
ixture Weight ² 6.4kg 7.7kg 9.1kg 14.9kg 21.0kg ixture Primary Material(s) Aluminium Alloy and Stainless Steel Fixings ixture Finish Painted UV Stabilised Polycarbonate Dimming/Controls Parameters: imming Options 1-10V, DALI uilt-In Controls Photocell, PIR Sensor Ompatible intelligent lighting systems Diptions/Accessories: Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Qty of Modules	2	3	4	6	9	
Aluminium Alloy and Stainless Steel Fixings Exture Finish Painted Ens(es) Materials UV Stabilised Polycarbonate Dimming/Controls Parameters: Imming Options 1-10V, DALI Finith Photocell, PIR Sensor Ompatible intelligent lighting systems Wireless Controls and Monitoring, Photocell Options/Accessories: Idounting Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Electrical Connection			1000mm 3-Core Cable			
ixture Finish ens(es) Materials Dimming/Controls Parameters: Dimming Options uilt-In Controls Dempatible intelligent lighting systems Dimming Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Fixture Weight ²	6.4kg	7.7kg	9.1kg	14.9kg	21.0kg	
Dimming/Controls Parameters: Dimming Options UV Stabilised Polycarbonate 1-10V, DALI Uilt-In Controls Photocell, PIR Sensor Ompatible intelligent lighting systems Diptions/Accessories: Jounting Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Fixture Primary Material(s)	Aluminium Alloy and Stainless Steel Fixings					
Dimming/Controls Parameters: Jamming Options Jamming Options Uilt-In Controls Descriptions Accessories: Jamming Options Wireless Controls and Monitoring, Photocell Descriptions/Accessories: Jamming Options Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Fixture Finish	Painted					
timming Options uilt-In Controls Photocell, PIR Sensor Ompatible intelligent lighting systems Wireless Controls and Monitoring, Photocell Options/Accessories: Iounting Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Lens(es) Materials	UV Stabilised Polycarbonate					
Photocell, PIR Sensor Wireless Controls and Monitoring, Photocell Options/Accessories: Iounting Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Dimming/Controls Parameters:						
Options/Accessories: Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Dimming Options	1-10V, DALI					
Options/Accessories: Iounting Styles Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Built-In Controls	Photocell, PIR Sensor					
Iounting StylesUniversal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall MountIiscellaneous AccessoriesWire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Compatible intelligent lighting systems	Wireless Controls and Monitoring, Photocell					
liscellaneous Accessories Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor	Options/Accessories:						
	Mounting Styles	Universal Bracket (optional 180° rotation), Slip Fit, Twin Surface Mount Brackets, Eye Bolt, Twin Eye Bolts, Wall Mount					
vailable Product Colours Black (RAL 9011), Grev (RAL 7045)	Miscellaneous Accessories	Wire Grill, Corrosion Resistant Finish, IP68 13A In-Line Connector, Photocell, PIR Sensor, Microwave Sensor					
	Available Product Colours	Black (RAL 9011), Grey (RAL 7045)					

¹ Electrical Parameter data is for D1 drivers, unless otherwise stated

All stated values should be considered indicative only. Technical data is provided from sample luminaires and construction components as assessed by OEM(s) under industry-standard, laboratory conditions. In practice, stated values can vary. Kellwood Lighting operates a policy of continual product improvement. Our luminaires' capabilities are regularly enhanced to outperform in-class market alternatives. Please contact our technical team directly for clarifications prior to purchase. All images depicted should be considered indicative only. Stated product warranty periods do not include associated labour costs. Stated product warranty periods are for UK projects only. For international projects, please contact our offices directly. Optional upgrades can often affect or supersede unit technical parameters, capabilities, and warranties. It is the responsibility of the purchasing authority to ensure selected hardware is suitable for application. For further documentation, including Returns Policy and Conditions of Unit Failure, please contact our offices. Hazardous area documentation (eg. ATEX) are issued to OEM codes. WEEE compliance reference code: WEE/ MP3838PR/SCH. Please do not look directly at LED lighting products during operation.

This datasheet & corresponding certification should be reviewed by a competent person to ensure project suitability. ©2020 Kellwood Engineering Ltd. All rights reserved.



² Excludes bracketry. Refer to the Packaging Weights & Dimensions data sheet for bracketry and accessory weights



Features Summary



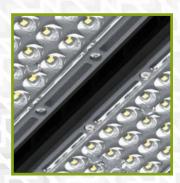
Multiple Mounting Options

Universal bracket, universal bracket with 360° rotation, slip fit, twin surface mount brackets, eye bolt, twin eye bolts and wall mount available



Standalone Integrated Controls

Occupancy, multi-step dimming, & daylight harvesting systems available - Refer to series ordering codes for options



Flexible Optics

Racking-specific, open-area, street lighting & floodlight dispersion patterns available



IP68 Barrel Connector

Temperature-resistant, 13A, TUV-rated, ingress-resistant connector with optional length of three core flex



Thermal Specialist

Product application in high ambient temperatures possible through chassis & heat sink upgrades - See Parker Series



Stainless Steel Components

Exposed metal fixtures are fabricated from 304 stainless steel



WAGO Connectors

Internal connections use premium WAGO connectors for reliability



Safety Wire & Carabiner

Additional safety-feature



Fitting Colouration

Fittings supplied with grey surface finish as standard. Black and other custom colours available subject to MOQs (typically >100 units)



Integrated Photocell

Integrated dusk-til-dawn photocells available for high mast and flood lighting applications



DALI / 1-10V

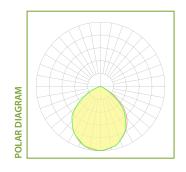
Intelligent operation compatibility - dimming, photocells, occupancy...

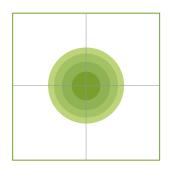


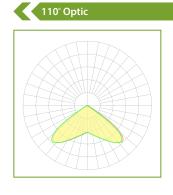
Please note - images shown are intended to be illustrative only. For exact data, please refer to specific product photometry, available for download from our website.

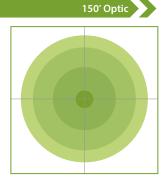
Indicative Product Photometry

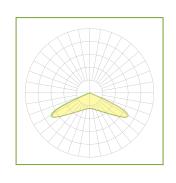
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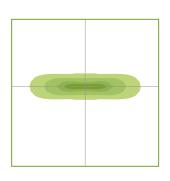


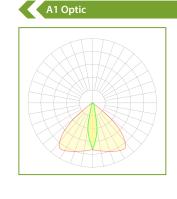


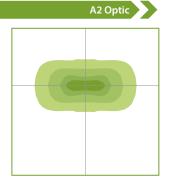


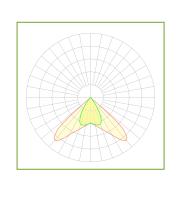


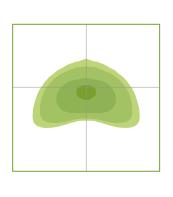


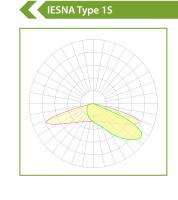


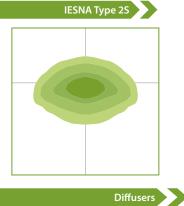


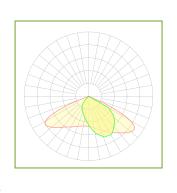


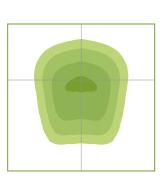


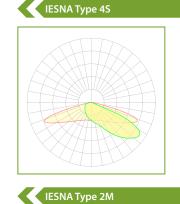






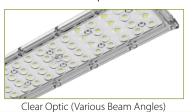


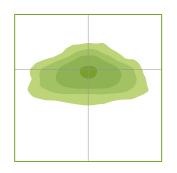


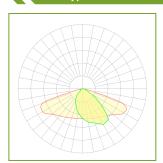


This series is available with the following diffusers. Each diffuser will have a varying effect on photometric distribution and intensity.

Please refer to downloadable photometrics for exact data.







Colourations on isolux diagrams are qualitative, i.e. the same colour on any two isolux diagrams will not necessarily have the same lux value.



Standard product code fields are presented as: Further customisation may be available - please contact us if required



Product Ordering Codes

PRODUCT -	- POWER -	CRI & CCT -	- OPTIC -	- DRIVER -	MOUNTING -	- COLOUR -	- MODIFICATIONS
FOR2	100 100W	730 CRI >70, 3000K	90 90° CIRCULAR	D1 NON-DIM	UB ¹ UNIVERSAL BRACKET	GR GREY (RAL 7045)	PH1 PHOTOCELL
	150 150W	740 CRI >70, 4000K	110 110° CIRCULAR	D2 1-10V	UE UNIVERSAL BRACKET (180° ROTATION)	BL BLACK (RAL 9011)	M1 MICROWAVE SENSOR 1
	200 200W	750 CRI >70, 5000K	150 150° CIRCULAR	D3 DALI	SF SLIP FIT	GR2 GREY - CORROSION RESISTANT (RAL 7045)	M2 MICROWAVE SENSOR (REMOTE CONTROL)
	300 300W	760 CRI >70, 6000K	A1 30X100° RECTANGULAR		TM TWIN SURFACE MOUNT BRACKETS	BL2 BLACK - CORROSION RESISTANT (RAL 9011)	P1 PIR SENSOR 1
	450 450W	840 CRI >80, 4000K	A2 60X100° RECTANGULAR		EB EYE BOLT		UM Compatible with umbilical emergency module
		850 CRI >80, 5000K	1S IESNA TYPE I SHORT		TE TWIN EYE BOLTS		WG WIRE GRILL
		860 CRI >80, 6000K	2S IESNA TYPE II SHORT		WM WALL MOUNT		
			4S IESNA TYPE IV SHORT				
			2M IESNA TYPE II MEDIUM				

 1 Universal Bracket (mounting code "UB") has restricted rotations when mounted on a solid surface: 100W=±60°, 150W=±45°, and 200W=±20°. 300W, and 450W not available with UB mount. Specify the Extended Universal Bracket (mounting code "UE") to allow for unrestricted rotation, e.g. wall mounting while facing directly at the ground.

GENERAL NOTES:

- 1. IF MORE THAN ONE MODIFICATION IS REQUIRED, SEPARATE EACH MODIFICATION WITH A HYPHEN AT THE END OF THE PRODUCT CODE
- 2. PLEASE ENSURE SELECTION OF COMPATIBLE DRIVER FOR OCCUPANCY SENSORS WITH DIMMING FUNCTIONALITY
- 3. PLEASE NOTE THAT MODIFICATIONS WHICH AFFECT LIGHT OUTPUT HAVE SEPARATE PHOTOMETRIC FILES IDENTIFIED WITH ..."+(MODIFICATION)"
- 4. ALTERNATIVE DRIVERS MAY BE AVAILABLE PLEASE CONTACT OUR OFFICE FOR FURTHER DETAILS
- 5. IF PRODUCT IS CUSTOMISED, CODES WILL BE ALTERED AS NECESSARY

Product Ordering Code Examples: FOR2-100-750-110-D1-UB-GR FOR2-200-760-A1-D2-UB-GR-M2-WG

DRIVER MANUFACTURER							
POWER	D1	D2	D3				
100 100W	Mean Well	Mean Well	Inventronics				
150 150W	Mean Well	Mean Well	Inventronics				
200 200W	Mean Well	Mean Well	Inventronics				
300 300W	Mean Well	Mean Well	Inventronics				
450 450W	Mean Well	Mean Well	Inventronics				

CONTACT OUR OFFICE FOR FURTHER INFORMATION ON DRIVER PARAMETERS

ACCESSORIES	
JB1 IP68 13A IN-LINE CONNECTOR	
JB1-(LENGTH IN METRES) IP68 13A IN-LINE CONNECTOR WITH CABLE TO REQUESTED LENGTH	

