

Harvard
Technology

CoolLED

**CLK Programmable 1-10V &
CL40 Programmable Dali**

*A technical guide to product
substitutions*



SOLUTIONS



Harvard Technology's innovative CoolLED drivers have been revolutionising lighting applications for a number of years and have already been installed across the world. Harvard Technology's programmable LED drivers, represent one of the latest advancement of the CoolLED driver range – adding new ground-breaking features and unparalleled efficacies.

A constant move to produce the most technologically advanced equipment on the market has meant that LED drivers are evolving at breakneck speed. This rapid development has led to a number of new innovations, including new software programmable LED drivers.

The unique capabilities of programmable LED drivers make them a growing commodity across a range of lighting applications. Such solutions allow the freedom to control the output power of the LED driver in any configuration required

Harvard Technology's programmable LED drivers range provides complete freedom to control the output power of an LED driver in any configuration, with drive current programming in 1mA step increments and smooth dimming options. One of the most important benefits of choosing a programmable driver is that users can use the same hardware for different applications, by adjusting the operating current and in turn eliminating the need to carry multiple variants as stock items.

Available in a variety of driver footprints, the CLX, CLK, CL40, CLS and now includes the latest Gen III technology; the CLi.

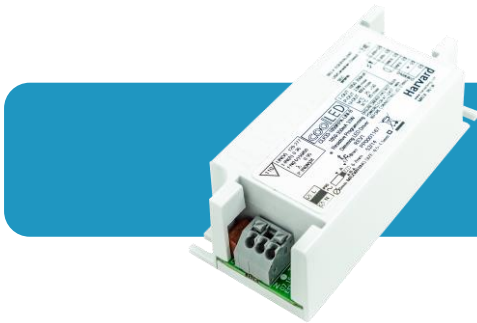
The pace of change in the LED lighting industry means that the challenges and choices are ever growing, especially as the IoT era takes full effect and drives changes in technology. Certainly, the next generation of LED drivers present new opportunities and promise higher levels of performance and functionality than previously attainable.

All Harvard Technology's LED Solutions are designed, developed and manufactured in the UK and come with a five-year warranty.



CLK Analogue up to 33W

Suitable for a wide range of applications and fixture types and programmable from 100 – 1050mA, the CLK Analogue software programmable driver delivers up to 33W of power, with the ability to dim to 1% of maximum output current as well as dim to off functionality.



CL40 Dali up to 40W

Programmable from 100-1050mA, the CL40 Dali programmable driver delivers up to 40W of power, with full DALI dimming support from 100% to 1% output current, and the ability to turn completely off.





We are extremely proud of our new programmable LED driver range, which not only offers a high-performance solution but also enables a level of programmability that has not previously been obtainable. The range also outperforms the competition in terms of programming time, delivers substantial savings and has a high efficiency design, which ensures cool operation and long life. By providing the new CLi, CLK, CLX and CLS programmable drivers, we have enabled customers to standardise one driver configurable on their production line, suitable for all types of LED fixtures under 500 lumens to over 4000 lumens.



Tim McKernan – Head of European Sales

Premier Service Partners

Our Premier Service Partners already hold inventory of popular Harvard product including our new CLK 1-10V Programmable and CL40 Dali Programmable LED drivers and are perfectly placed to service smaller transactions on a short lead time basis. Their contact details are highlighted on the map below and we trust that you will and these chosen Premier Service Partners more than helpful should you need to use this channel.

Why buy from a Premier Service Partner?



Top selling products in stock



Superb, personal service



No minimum order cost or quantities



Reduced lead times

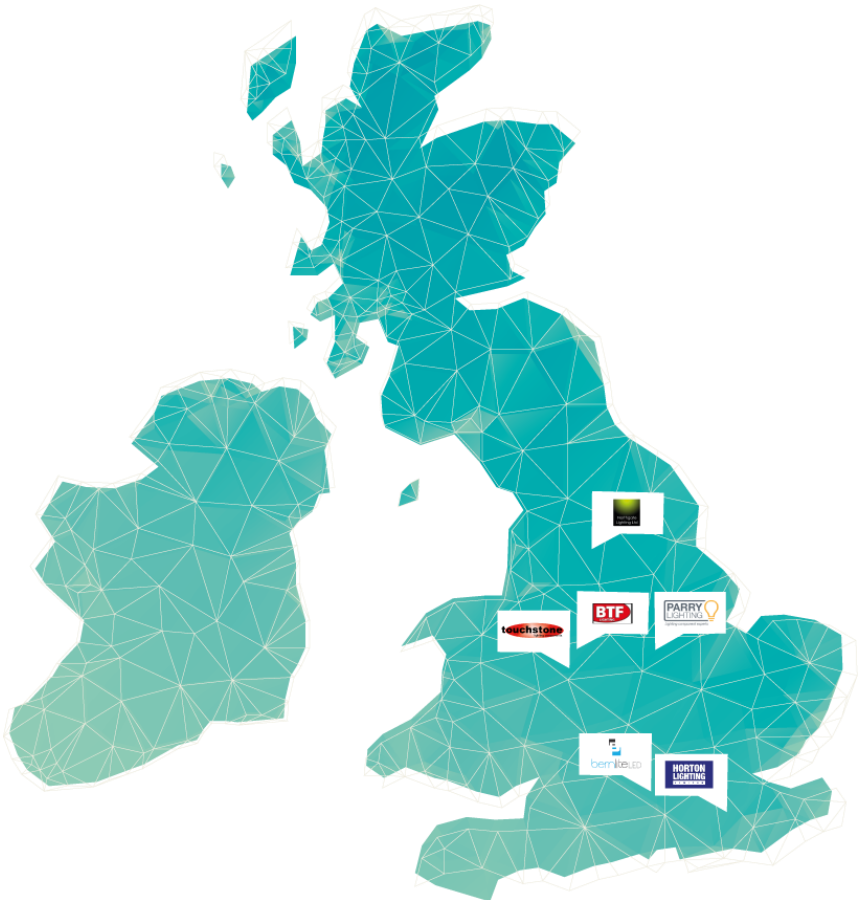


Local supplier

Our customers will continue to receive the same high standard of advice and technical support in the normal way as required, the only difference being the addition of a dedicated service route for your small orders.

Our UK based Premier Service Partners

- Bernlite
- BTF Lighting
- Horton Lighting
- Northgate Lighting
- Parry Lighting
- Touchstone Lighting



Redefined Service

Accompanying our latest product developments across the CoolLED product family, we are also pleased to share with our latest initiatives across our Service channel.

From our most popular drivers being despatched within 24 hours from time of order to our Programmable driver range being custom programmed and despatched in only 72 hours!

Please speak to one of our sales representatives for more detail.



Our most popular LED drivers picked, packed and dispatched to you in 24 hours*

Including; Phase dimmable, CL Switchable, CL Analogue, CL DALI, and non-dimmable



Our leading programmable LED drivers picked, custom programmed & dispatched within 72 hours*

Including; CLX DALI, CLK Analogue, CLS DALI & Analogue

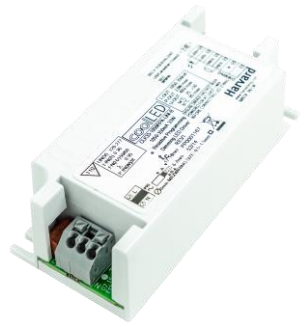
- Carry less stock
- Programmable in 1mA increments
- One part code can be used for many drive current and power requirements

*See website for further details & terms.



CLK Analogue up to 33W

The CLK 1-10V programmable drivers are high performing, feature rich and have unparalleled efficiencies. The programmable functionality excludes the need to carry additional and excess stock and the table below highlights the vast range of Harvard's legacy skus that the CLK 1-10V can replace;



CLK33-1050A PROG

CLK33-1050A PROG			
CL Standard	CL Switchable	CLK Switchable	CL Analogue
CL270-240-A/B/C	CL500S-240-B/C	CLK175S2-240-B/C	CL220A-240-A/B/C
CL350-240-A/B/C/AB	CL700S-240-B/C	CLK275S2-240-B/C	CL250A-240-B/C
CL400-240-A/B/C	CL700S2-240-B/C	CLK700S-240-B/C/AB**	CL270A-240-B/C
CL500-240-A/B/C/AB	CL900S-240-B/C	CLK700S2-240-B/C	CL350A-240-A/B/C
CL600-240-A/B/C	CL1000S-240-A/B/C	CLK1000S-240-B/C/AB**	CL450A-240-B/C
CL700-240-A/B/C/AB	CL1400S-240-A/B/C	CLK850S2-240-B/C	CL500A-240-A-B-C/AB
CL800-240-B/C		CLK1050S2-240-B/C	CL600A-240-A/B/C
CL1000-240-A/B/C/AB			CL700A-240-A/B/C/AB
CL1050-240-A/B/C			CL900A-240-B/C 900mA
			CL1000A-240-A/B/C/AB
CL Analogue Low Voltage	CLK Analogue	CL40 Analogue	
CL350AL-240-B/C	CLK350A-240-B/C	CL40-700AF/F12-240-OF/B/C	CL1200A-240-A/B/C
CL500AL-240-B/C	CLK500A-240-B/C	CL40-1050AF/F12-240-OF/B/C	
CL700AL-240-B/C	CLK700A-240-B/C		
CL1050AL-240-B/C	CLK1050A-240-B/C		

* In most instances the programmable substitute drivers listed here will meet your requirements for application, however forward voltage and case styles may differ so please check with your sales rep for more details.



CL40 Dali up to 40W

The CL40 programmable drivers are high performing, feature rich and have unparalleled efficiencies. The programmable functionality excludes the need to carry additional and excess stock and the table below highlights the vast range of Harvard's legacy skus that the CL40 Dali programmable can replace;



CL40-1050S2D-PROG

CL40-1050S2D PROG			
CL Dali Gen II	CL Dali Low Voltage	CL Dali	
CL500D2-240-AB-CC	CL500DL-240-B/C	CL500D-240-A/B/C	CL700D-240-C-BRUM
CL500D2-240-A/B/C	CL700DL-240-B	CL500D-240-C-BRUM	CL700D-240-C-PROJ
CL500D2-240-C-BRUM	CL700DL-240-C	CL500D-240-C-HON	CL700D-240-C-REG
CL500D2-240-C-CAR	CL700DL-240-C-ACDC	CL540D-240-B	CL700D-240-C-SOI
CL500D2-240-B-SEC	CL900DL-240-C	CL540D-240-B-HON	CL750D-240-B
CL600D2-240-A/B/C	CL1050DL-240-B/C	CL700D-240-A/B	CL900D-240-B/C
CL700D2-240-A/B/C	CL1400DL-240-B-REGLBL	CL700D-240-B-THX	CL1000D-240-A/B/C
CL700D2-240-C-CAR	CL1400DL-240-C	CL700D-240-B-XBRI	CL1000D-240-C-BRUM
CL700D2-240-C-LUC	CLO	CL700D-240-C	CL1030D-240-B-HON
CL900D2-240-A/B/C	CLO500D-240-B	CL700D-240-C-20%	CL1200D-240-B/C
CL900D2-240-C-CAR	CLO700D-240-B	CL700D-240-C-ACDC	CL1400D-240-B/C
CL1050D2-240-A/B/C	CLO700D-240-B-XBRI		
CL40 Dali Switchable	CLO700D-240-C		
CL40-500S2D-240-B/C/OF	CLO700D-240-C-ACDC		
CL40-1050S2D-240-B/C/OF	CLO1000D-240-B		
	CLO1400DL-240-B-REGLBL		

Continued over

CL40-500S2D-PROG

CL40-500S2D PROG			
CL Dali Gen II	CL40 Dali	CL Dali	
CL250D2-240-C	CL40-350S2D-240-B/C/OF	CL270D-240-B/C	CL450D-240-C
CL270D2-240-B/C	CL40-500S2D-240-B/C/OF	CL270D-240-C-REG	CL500D-240-A/B/C
CL270D2-240-C-REG	CL40 Dali Switchable	CL350D-240-A/B/C	CL500D-240-C-BRUM
CL350D2-240-B/C	CL40-350S2D-240-B/C/OF	CL350D-240-C-40%	CL500D-240-C-HON
CL350D2-240-C-BRUM	CL40-500S2D-240-B/C/OF	CL350D-240-C-ACDC	CL350D-240-C-COL
CL350D2-240-C-CAR	CLO	CL350D-240-C-BRUM	CL450D2-240-C
CL500D2-240-AB-CC	CLO350D-240-B	CL450D-240-B	
CL500D2-240-A/B/C	CLO500D-240-B		
CL500D2-240-C-BRUM	CL Dali Low Voltage		
CL500D2-240-C-CAR	CL350DL-240-B/C		
CL500D2-240-B-SEC	CL500DL-240-B/C		

* In most instances the programmable substitute drivers listed here will meet your requirements for application, however forward voltage and case styles may differ so please check with your sales rep for more details.