KIT_LED_XMC1202_AS_01

Overview

Description:

RGB LED Lighting Shield with XMC1202

Hardware Compatible with Arduino

Order Nr: KIT_LED_XMC1202_AS_01

Related Products:
XMC1000 family (/cms/en/product/microcontroller/32-bit-industrial-microcontroller-based-on-arm-registered-cortex-tm-m/32-bit-xmc1000-industrial-microcontroller-arm-registered-cortex-tm-m0/channel.html?channel=db3a30433c1a8752013c1aa35a6a0029)
,
XMC1100 Boot KIT (/cms/en/product/evaluation-boards/KIT_XMC11_BOOT_001/productType.html?productType=db3a30443b360d0e013b8f5163c46f62)
,
DAVE™ IDE (/cms/en/product/microcontroller/32-bit-industrial-microcontroller-based-on-arm-registered-cortex-tm-m/32-bit-xmc1000-industrial-microcontroller-arm-registered-cortex-tm-m0/dave-tm- 13-free-development-platform-for-code-generation/channel.html?channel=5546d46145f1f3a4014619e925171bcc)
,
BSR606N (/cms/en/product/power/mosfet/power-mosfet/n-channel-small-signal-20v-800v/BSR606N/productType.html?productType=db3a30443e78f08a013e7adfa1bc05a6)

Contain: KIT_LED_XMC1202_AS_01using XMC1202-T028X0016 MCU

The RGB LED lighting shield from Infineon technologies is one of the first intelligent evaluation boards compatible with Arduino as well as Infineon's XMC1100 BOOT KIT. It is designed to be easily configurable and combinable for different LED light engines and lamps, for fast prototyping and in-expensive evaluation of LED lighting applications.
The RGB LED Lighting Shield with XMC1202 uses a DC/DC buck topology and is able to drive up to 3 LED channels with constant current. The shield itself is powered by a programmable
XMC 32-bit ARM® MCU (/cms/en/product/microcontroller/32-bit-industrial-microcontroller-based-on-arm-registered-cortex-tm-m/channel.html?channel=db3a30433c1a8752013c3e221b9d004f)
with embedded Brightness Color Control Unit (BCCU, XMC1200 MCU series), for flicker-free LED dimming and color control.
The BCCU enables extreme low-cost but high quality LED lighting solutions, with minimal user code. The RGB LED lighting shield has also been designed to provide options for the evaluation of smooth, eye-friendly dimming, color mixing for different topologies, and it can be extended with for example DALI/DMX or radar.

Summary of Features:

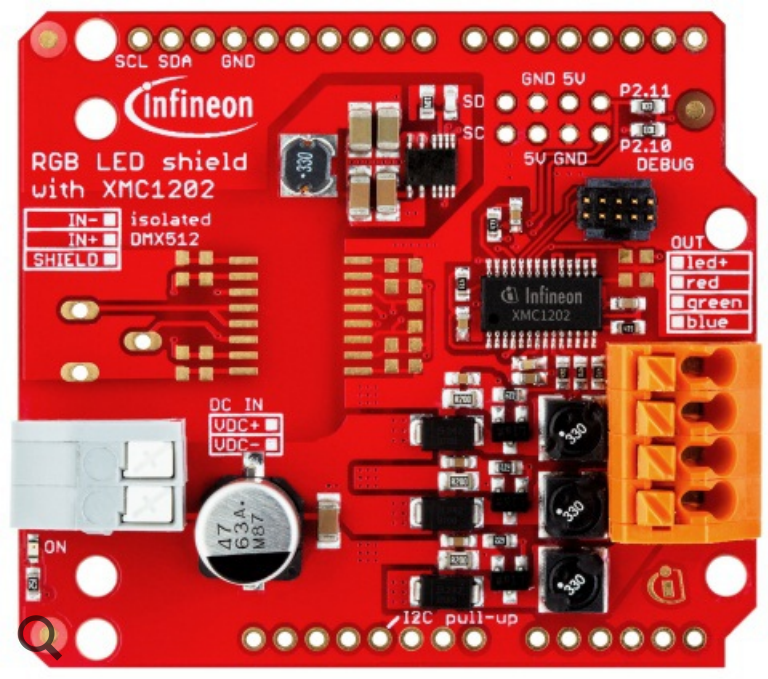
- Compatible with Arduino Uno R3 and XMC1100 Boot Kit from Infineon
- Easy configurable for various light engines and any input voltage (within operating conditions)
- Wide DC input voltage range
- Simple I ^{2}C interface

Benefits:

- Fast prototyping of LED lighting
- Flicker-free light thanks to high-speed pulse density modulation
- Easy-to-use dynamic dimming and color control
- Small size thanks to high-frequency current control (high power density)
- Backdoor access to on-board-microcontroller for advanced users and parameterization

Target Applications:

- LED lighting



Parametrics

Parametrics	**KIT_LED_XMC1202_AS_01**
Applications	Lighting Building Automation
Configuration	XMC1000
Family	Microcontroller
Input Type	DC
Product Description	The RGB LED Lighting Shield from Infineon is one of the first intelligent evaluation boards compatible with Arduino as well as Infineon's XMC1100 Boot Kit. The RGB LED Lighting Shield with XMC1202 for Arduino uses a DC/DC buck topology and is able to drive up to 3 LED channels with constant current. The shield itself is powered by a programmable XMC 32-bit ARM® MCU with embedded Brightness Color Control Unit (BCCU, XMC1200 MCU series), for flicker-free LED dimming and color control.
Product Name	RGB LED Lighting Shield with XMC1202 for Arduino
Supply Voltage **min max**	12.0 V 48.0 V

Target Application	Industrial
Topology	Buck
Type	Evaluation Board

Documents

+ Expand all

+ Product Brief

RGB LED Lighting Shield - Product Brief (/dgdl/Infineon-RGB_LED Lighting Shield_PB-PB-v01_00-EN.pdf?fileId=5546d4624933b87501497af6dacd211a)
› EN (/dgdl/Infineon-RGB_LED Lighting Shield_PB-PB-v01_00-EN.pdf?fileId=5546d4624933b87501497af6dacd211a)
01_00 | 2014-11-04 | pdf | 447 KB

+ Getting Started

Quick Start Guide - RGB LED Lighting Shield with XMC1202 for Arduino (/dgdl/Infineon-Quick_Start_Guide_RGB_LED_Lighting_Shield_with_XMC1202_for_Arduino.pdf-GS-v01_00-EN.pdf?fileId=5546d46249be182c0149cceef31d7373)
› EN (/dgdl/Infineon-Quick_Start_Guide_RGB_LED_Lighting_Shield_with_XMC1202_for_Arduino.pdf-GS-v01_00-EN.pdf?fileId=5546d46249be182c0149cceef31d7373)
01_00 | 2014-11-20 | pdf | 423 KB

+ Application Notes

AP32313 – XMC1000 - Driving LED Strip Lights with the RGB LED Lighting Shield (/dgdl/Infineon-AP32313-Driving-LED-Strip-Lights-with-the-RGB-LED-Lighting-Shield-AN-v01_00-EN.pdf?fileId=5546d4624f205c9a014f45de72ef267a)
› EN (/dgdl/Infineon-AP32313-Driving-LED-Strip-Lights-with-the-RGB-LED-Lighting-Shield-AN-v01_00-EN.pdf?fileId=5546d4624f205c9a014f45de72ef267a)
01_00 | 2015-08-19 | pdf | 623 KB

AP32314 - XMC1000 - Tunable White LED Lamp Control with RGB LED Lighting Shield (/dgdl/Infineon-AP32314-Tunable-White-LED-Lamp-Control-with-RGB-LED-Lighting-Shield-AN-v02_00-EN.pdf?fileId=5546d4624f205c9a014f45de6ae7265a)
› EN (/dgdl/Infineon-AP32314-Tunable-White-LED-Lamp-Control-with-RGB-LED-Lighting-Shield-AN-v02_00-EN.pdf?fileId=5546d4624f205c9a014f45de6ae7265a)
02_00 | 2016-10-18 | pdf | 5.8 MB

+ User Manual

Board Manual - XMC1202 - RGB LED Lighting Shield with XMC1202 for Arduino (/dgdl/Infineon-Board_Manual_-_XMC1202_-_RGB_LED_Lighting_Shield_with_XMC1202_for_Arduino_-_v1_0-UM-v01_00-EN.pdf?fileId=5546d46249be182c0149ccca3860734d)
› EN (/dgdl/Infineon-Board_Manual_-_XMC1202_-_RGB_LED_Lighting_Shield_with_XMC1202_for_Arduino_-_v1_0-UM-v01_00-EN.pdf?fileId=5546d46249be182c0149ccca3860734d)
01_00 | 2014-11-20 | pdf | 2.7 MB

Training

Application - Lighting - Digital Addressable Lighting Interface (DALI) Control Gear (/dgdl/Infineon-Application_Lighting_Digital_Addressable_Lighting_Interface_(DALI)_Control_Gear-TR-v01_00-EN.pdf?fileId=5546d4625696ed76015698e9d86c7cc5)
› EN (/dgdl/Infineon-Application_Lighting_Digital_Addressable_Lighting_Interface_(DALI)_Control_Gear-TR-v01_00-EN.pdf?fileId=5546d4625696ed76015698e9d86c7cc5)
01_00 | 2016-08-17 | pdf | 2.1 MB

Order

Sales Product Name	**KIT_LED_XMC1202_AS_01**
OPN	KITLEDXMC1202AS01TOBO1
Product Status	active and preferred
Package name	--
Order online	
Completely lead free	
Halogen free	
RoHS compliant	yes
Packing Size	1
Packing Type	CONTAINER
Moisture Level	
Moisture Packing	NON DRY

Boards

PCB Design Data

RGB LED Lighting Shield - PCB Data (/dgdl/Infineon-RGB_LED_Lighting_Shield-PCB-v02_00-EN.zip?fileId=5546d46249cd10140149f5e19c041ef3)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-PCB-v02_00-EN.zip?fileId=5546d46249cd10140149f5e19c041ef3)
02_00 | 2014-11-28 | zip | 414 KB

Tools & Software

Software

RGB LED Lighting Shield - Arduino Uno R3 CV - LED Strip with direct access, max 900mA (/dgdl/Infineon-

RGBLED_CV_Directaccess_900mAlimit-SW-v01_00-EN.unknown?fileId=5546d4624ca27d02014cb3277c9b0390)
› EN (/dgdl/Infineon-RGBLED_CV_Directaccess_900mAlimit-SW-v01_00-EN.unknown?fileId=5546d4624ca27d02014cb3277c9b0390)
01_00 | 2015-04-01 | unknown | 21 KB

RGB LED Lighting Shield - Standalone example using PDM_DIMMED_LED_LAMP APP (/dgdl/Infineon-PDM_DIMMED_LED_LAMP_CCM_BUCK_RGB_SHIELD_EXAMPLE_1_XMC12-SW-v01_00-EN.zip?fileId=5546d46250cc1fdf0151014ac4332da2)
› EN (/dgdl/Infineon-PDM_DIMMED_LED_LAMP_CCM_BUCK_RGB_SHIELD_EXAMPLE_1_XMC12-SW-v01_00-EN.zip?fileId=5546d46250cc1fdf0151014ac4332da2)
01_00 | 2015-11-13 | zip | 16.4 MB

RGB LED Lighting Shield - Tunable White LED Control with Potentiometers using XMCLib (/dgdl/Infineon-RGB_LED_Lighting_Shield_Tunable_White_LED_Control_with_Potentiometers_XMCLib-SW-v01_00-EN.exe?fileId=5546d4624e765da5014ede55dc9e0c02)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield_Tunable_White_LED_Control_with_Potentiometers_XMCLib-SW-v01_00-EN.exe?fileId=5546d4624e765da5014ede55dc9e0c02)
01_00 | 2015-07-30 | exe | 1.5 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 1 - LedEngin 24V 700mA - Simple test (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-1-LedEngin_24V_700mA-simple_test-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdaf28fc0164)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-1-LedEngin_24V_700mA-simple_test-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdaf28fc0164)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 2 - Safe (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-2-Safe.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa071023a)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-2-Safe.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa071023a)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 3 - LedEngin 48V 700mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-3-LedEngin_48V_700mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa21f023b)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-3-LedEngin_48V_700mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa21f023b)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 4 - LedEngin 48V 700 mA with direct access (/dgdl/Infineon-RGBLED_4_LEDEngin_Advanced_48V700mA_XMC11-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa594023d)
› EN (/dgdl/Infineon-RGBLED_4_LEDEngin_Advanced_48V700mA_XMC11-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa594023d)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 5 - Traxon Nano XB-18 48V 350mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-5-Traxon_Nano_XB-18_48V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa3df023c)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-5-Traxon_Nano_XB-18_48V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa3df023c)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 6 - Traxon Nano XB-9 24V 350mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-6-Traxon_Nano_XB-9_24V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa747023e)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-6-Traxon_Nano_XB-9_24V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa747023e)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 7 - Traxon Nano XB-9 24V 350mA DMX512 enabled (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-7-Traxon_Nano_XB-9_24V_350mA-DMX512_enabled.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa911023f)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-7-Traxon_Nano_XB-9_24V_350mA-DMX512_enabled.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaa911023f)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield - XMC1100 Boot Kit 8 - Traxon Nano XB-18 24V 350mA DMX512 enabled (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-8-Traxon_Nano_XB-18_24V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaaab50240)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-XMC1100_Boot_Kit-8-Traxon_Nano_XB-18_24V_350mA.exe-SW-v02_00-EN.zip?fileId=5546d46249cd10140149cdcaaab50240)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield – Standalone example using XMC Lib (/dgdl/Infineon-RGB_LED_Lighting_Shield_standalone_XMCLib-SW-

v02_00-EN.exe?fileId=5546d4624ca27d02014cb32774e8038e)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield_standalone_XMCLib-SW-v02_00-EN.exe?fileId=5546d4624ca27d02014cb32774e8038e)
02_00 | 2015-07-29 | exe | 1.4 MB

RGB LED Lighting Shield – XMC1100 Boot Kit CV – LED Strip with direct access, max 900mA (/dgdl/Infineon-RGBLED_CV_Advanced_900mAlimit_XMC11-SW-v02_00-EN.zip?fileId=5546d4624ca27d02014cb31e3bf50379)
› EN (/dgdl/Infineon-RGBLED_CV_Advanced_900mAlimit_XMC11-SW-v02_00-EN.zip?fileId=5546d4624ca27d02014cb31e3bf50379)
02_00 | 2016-06-14 | zip | 6.9 MB

RGB LED Lighting Shield – XMC1202 Source Code (/dgdl/Infineon-RGB_LED_Lighting_Shield_XMC1202_Source_Code-SW-v06_00-EN.zip?fileId=5546d46249cd10140149f5eae2081ef4)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield_XMC1202_Source_Code-SW-v06_00-EN.zip?fileId=5546d46249cd10140149f5eae2081ef4)
06_00 | 2016-06-14 | zip | 15 MB

RGB LED Lighting Shield-Arduino Uno R3 1 - LedEngin 24V 700mA - storage and test (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-1-LedEngin_24V_700mA-storage_and_test-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdaf2ab10165)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-1-LedEngin_24V_700mA-storage_and_test-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdaf2ab10165)
01_00 | 2014-11-20 | exe | 286 KB

RGB LED Lighting Shield-Arduino Uno R3 2 - Safe (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-2-Safe-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaac830241)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-2-Safe-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaac830241)
01_00 | 2014-11-20 | exe | 287 KB

RGB LED Lighting Shield-Arduino Uno R3 3 - LedEngin 48V 700mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-3-LedEngin_48V_700mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdc175b20226)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-3-LedEngin_48V_700mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdc175b20226)
01_00 | 2014-11-20 | exe | 287 KB

RGB LED Lighting Shield-Arduino Uno R3 4 - LedEngin 48V 700mA with direct access (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-4-LedEngin_48V_700mA_with_direct_access-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdca9af70237)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-4-LedEngin_48V_700mA_with_direct_access-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdca9af70237)
01_00 | 2014-11-20 | exe | 287 KB

RGB LED Lighting Shield-Arduino Uno R3 5 - Traxon Nano XB-9 24V 350mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-5-Traxon_Nano_XB-9_24V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdca9cd50238)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-5-Traxon_Nano_XB-9_24V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdca9cd50238)
01_00 | 2014-11-20 | exe | 287 KB

RGB LED Lighting Shield-Arduino Uno R3 6 - Traxon Nano XB-18 48V 350mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-6-Traxon_Nano_XB-18_48V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaae250242)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-6-Traxon_Nano_XB-18_48V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaae250242)
01_00 | 2014-11-20 | exe | 287 KB

RGB LED Lighting Shield-Arduino Uno R3 7 - Traxon Nano XB-9 24V 350mA - DMX512 enabled (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-7-Traxon_Nano_XB-9_24V_350mA-DMX512_enabled-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaafca0243)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-7-Traxon_Nano_XB-9_24V_350mA-DMX512_enabled-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcaafca0243)
01_00 | 2014-11-20 | exe | 286 KB

RGB_LED_Lighting_Shield-Arduino_Uno_R3 8 - Traxon Nano XB-18 24V 350mA (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-8-Traxon_Nano_XB-18_24V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcab18c0244)
› EN (/dgdl/Infineon-RGB_LED_Lighting_Shield-Arduino_Uno_R3-8-Traxon_Nano_XB-18_24V_350mA-SW-v01_00-EN.exe?fileId=5546d46249cd10140149cdcab18c0244)
01_00 | 2014-11-20 | exe | 286 KB

Simulation

Simulation Tool

Simulate ONLINE - 48V Inverse Buck LED Driver (/dgdl/Infineon-48V Inverse Buck LED Driver-ST-v01_00-EN.html?fileId=5546d46253e9fadc0153f098ab704246)
› EN (/dgdl/Infineon-48V Inverse Buck LED Driver-ST-v01_00-EN.html?fileId=5546d46253e9fadc0153f098ab704246)
01_00 | 2016-04-07 | html | 795 B

Simulate ONLINE - 48V inverse buck LED driver for RGB color controlling with BSR606N and XMC1200 NEW (/dgdl/Infineon-lighting_led_48V_inverse_buck_BSR606N_XMC1200_RGB.tsc-ST-v01_00-EN.htm?fileId=5546d4625f96303e015fc071edb80622)
› EN (/dgdl/Infineon-lighting_led_48V_inverse_buck_BSR606N_XMC1200_RGB.tsc-ST-v01_00-EN.htm?fileId=5546d4625f96303e015fc071edb80622)
01_00 | 2017-11-15 | htm | 843 B

Support

(/cms/en/about-infineon/company/contacts/service-center/)

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Technical Assistance Center (TAC)

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You will receive a confirmation E-mail to validate your address in our system. Any attached file to the reply which will help to support your inquiry is highly appreciated.

First Name*

Last Name*

E-Mail*

Phone

Company*

Company website (URL)

Industry*

[please select]

Other Industry

Country / Territory*

[please select]

Preferred Distributor / Reseller*

[please select]

Other Distributor / Reseller

Product Name*

KIT_LED_XMC1202_AS_01

Estimated annual production volume (pieces) per year*

[please select]

Please post your technical question as detailed as possible*

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