



## Mid-IR Products

### Product Line Overview

### Mid-Infrared Light Emitting Diodes and Photodiodes

We offer:

- Standard LEDs
- Flip-Chip bounded LEDs
- Multi Chip LEDs
- PDs
- LED drivers and PD amplifiers

#### Standard LEDs

LED chips with circular or ring top contact

Product series	Peak wavelength
LED18	1.85 – 1.88 $\mu\text{m}$
LED19	1.95 $\mu\text{m}$
LED20	2.05 $\mu\text{m}$
LED21	2.15 – 2.18 $\mu\text{m}$
LED22	2.20 – 2.27 $\mu\text{m}$
LED23	2.31 – 2.35 $\mu\text{m}$
LED29	2.84 $\mu\text{m}$
LED34	3.40 $\mu\text{m}$

Product series	Peak wavelength
LED35	3.55 $\mu\text{m}$
LED36	3.65 $\mu\text{m}$
LED38	3.75 $\mu\text{m}$
LED39	3.90 $\mu\text{m}$
LED41	4.05 $\mu\text{m}$
LED43	4.15 $\mu\text{m}$
LED46	4.45 $\mu\text{m}$

#### Flip-Chip bounded LEDs

LED chip top surface is free of contacts

Product series	Peak wavelength
LED16FC	1.65 $\mu\text{m}$
LED17FC	1.75 $\mu\text{m}$
LED18FC	1.85 $\mu\text{m}$
LED19FC	1.95 $\mu\text{m}$
LED20FC	2.05 $\mu\text{m}$

Product series	Peak wavelength
LED21FC	2.15 $\mu\text{m}$
LED22FC	2.25 $\mu\text{m}$
LED23FC	2.35 $\mu\text{m}$
LED34FC	3.40 $\mu\text{m}$
LED37FC	3.75 $\mu\text{m}$

#### Multi Chip LEDs

A number of similar or different LED-chips mounted in a single compact package and driven together or independently.

#### Flip-Chip bounded LEDs

LED chip top surface is free of contacts






Product series	Peak wavelength
LED16FC	1.65 $\mu\text{m}$
LED17FC	1.75 $\mu\text{m}$

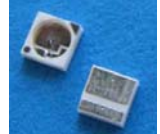


Product series	Peak wavelength
LED21FC	2.15 $\mu\text{m}$
LED22FC	2.25 $\mu\text{m}$



## Packages

We are offering a range of standard and customized packages for those Mid-IR LEDs and PDs

TO Packages	TO-18	TO-18 with PR	TO-5	TO-5 with PR	TO-8
	with/without window		with/without thermoelectronic module		
					
applied to	LED, PD		LED, PD, Multi Chip LED		Multi Chip LED

SMD Packages	3x3 mm	5x5 mm	5x5 mm with microreflector	5x5 mm for 3 chip array
				
applied to	LED			Multi Chip LED

## **LED drivers and PD amplifiers**

- LED mini-drivers
  - **mD-1c**: provides LED operation in QCW mode at fixed current and frequency
  - **mD-1p**: provides LED operation in pulse mode at fixed current, frequency and pulse duration
- LED drivers
  - **D-31**: provides LED operation in QCW and pulse modes at several frequencies and variable pulse durations and currents
  - **DLT-27**: provides operation and temperature stabilization of LED with built-in thermocooler in QCW and pulse modes at fixed frequency and pulse duration and variable currents
  - **DLT-37**: provides operation and temperature stabilization of LED with built-in thermocooler in QCW and pulse modes at several frequencies, variable pulse durations and currents
- PD Amplifiers
  - **AM-07**: converts the output current signal of a PD into a voltage output with amplification
  - **AMT-07**: provides temperature stabilization and converts the output current signal of a PD with built-in thermocooler into a voltage output with amplification