

# NCP5603

## High Efficiency Charge Pump Converter

The NCP5603 is an integrated circuit dedicated to the medium power White LED applications. The power conversion is achieved by means of a charge pump structure, using two external ceramic capacitors, making the system extremely tiny. The device supplies a constant voltage to the load from a low battery voltage source. It is particularly suited for the High Efficiency LED used in low cost, low power applications, with high extended battery life.

### Features

- Wide Battery Supply Voltage Range:  $2.7 < V_{CC} < 5.5$  V
- Automatic Operating Mode 1X, 1.5X and 2X Improves Efficiency
- Dimmable Output Current
- Up to 350 mA Output Pulsed Current
- Selectable Output Voltage
- High Efficiency Up To 90%
- Supports 2.5 kV ESD, Human Body Model
- Supports 200 V Machine Model ESD
- Low 40 mA Short Circuit Current
- Pb-Free Package is Available

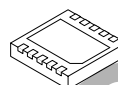
### Applications

- High Power LED
- Back Light Display
- High Power Flash

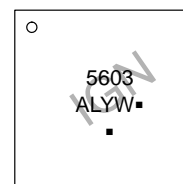


<http://onsemi.com>

### MARKING DIAGRAM



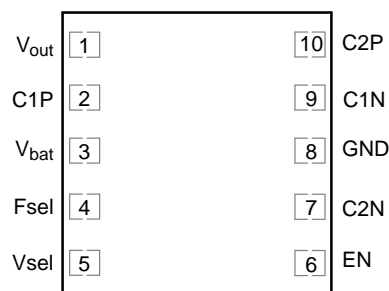
DFN10, 3x3  
MN SUFFIX  
CASE 485C



5603 = Specific Device Code  
A = Assembly Location  
L = Wafer Lot  
Y = Year  
W = Work Week  
■ = Pb-Free Package

(Note: Microdot may be in either location)

### PIN CONNECTIONS



(Top View)

### ORDERING INFORMATION

Device	Package	Shipping†
NCP5603MNR2	DFN10	3000/ Tape & Reel
NCP5603MNR2G	DFN10 (Pb-Free)	3000/ Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.



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