

## FEATURES

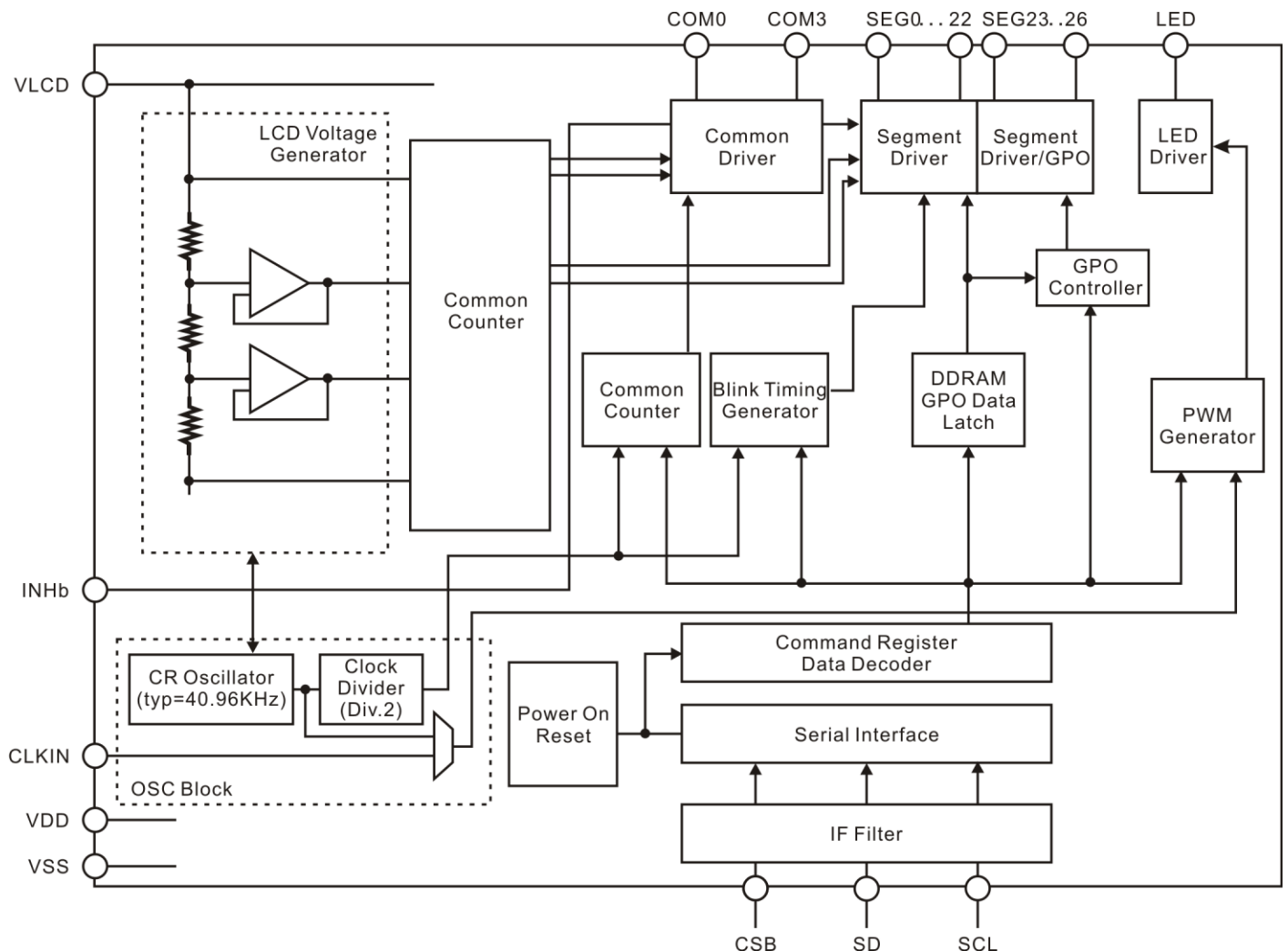
- LCD drive output: Common output: 4, Segment output: 27
- Integrated Display data RAM (DDRAM): RAM: 27x4 =108bit
- 3-wire Serial interface (SD, SCL, CSB)
- Integrated Oscillator circuit
- Integrated LCD Voltage generator circuit
- Support: 1/3 Bias, 1/3 or 1/4 Duty
- Support: 1/1 Bias, 1/1Duty (Static Driving)
- Integrated buffer amp
- Support separate power supply for Logic (VDD) and LCD (VLCD)
- Integrated LED driver circuit
- Segment output mode/GPO output mode selectable

- Support PWM generation from external clock or internal clock (resolution: 8bit)
- Low power consumption
- Support standby mode
- Integrated Power-On-Reset circuit (POR)
- No external components
- Support Blink function (Blink frequency 1.6, 2.0, 2.6, 4.0Hz selectable)
- Operating power supply: 1.8 ~ 3.6V
- LCD drive power supply: 2.7 ~ 5.5V

## APPLICATIONS

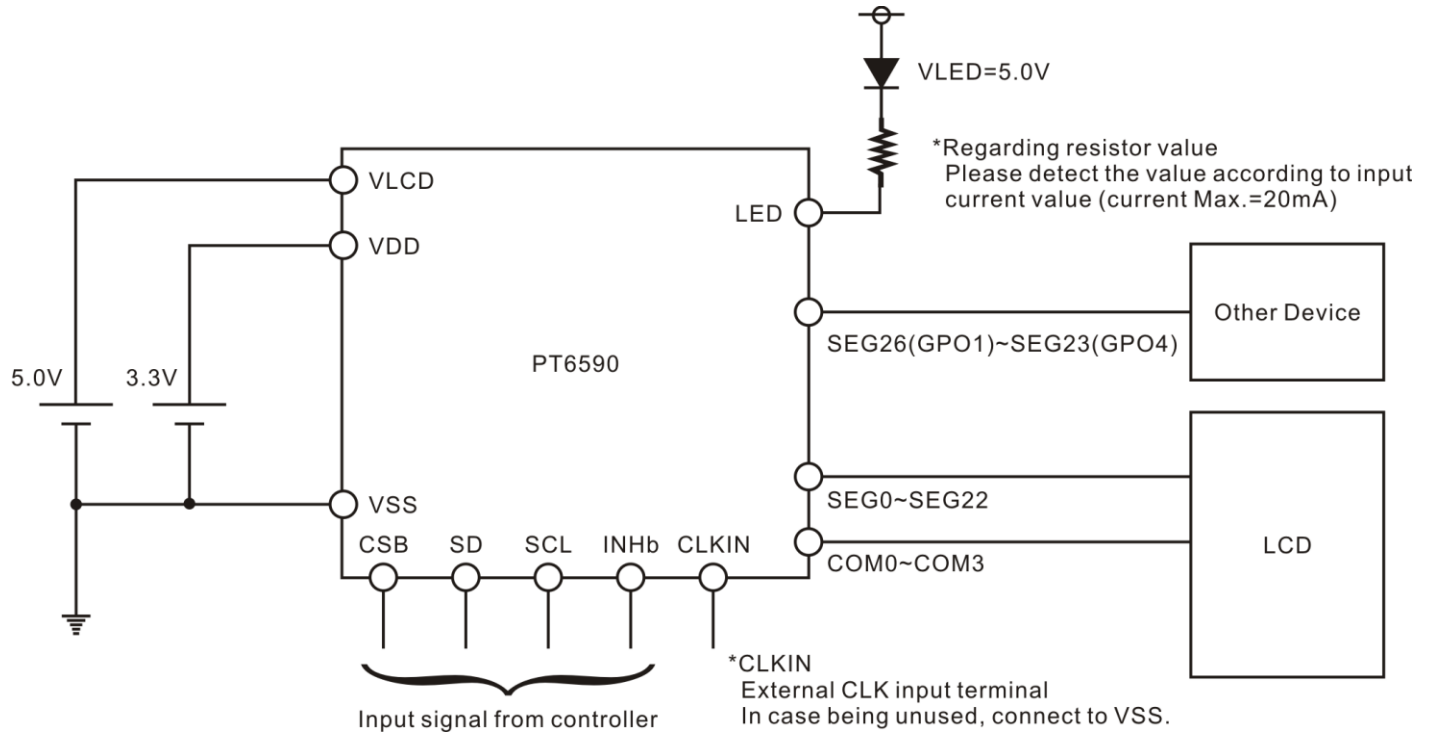
- Telephone, FAX, Portable equipment (POS, ECR, PDA etc.)
- DSC, DVC, Car audio, Home electrical appliance, Meter equipment etc.

## BLOCK DIAGRAM

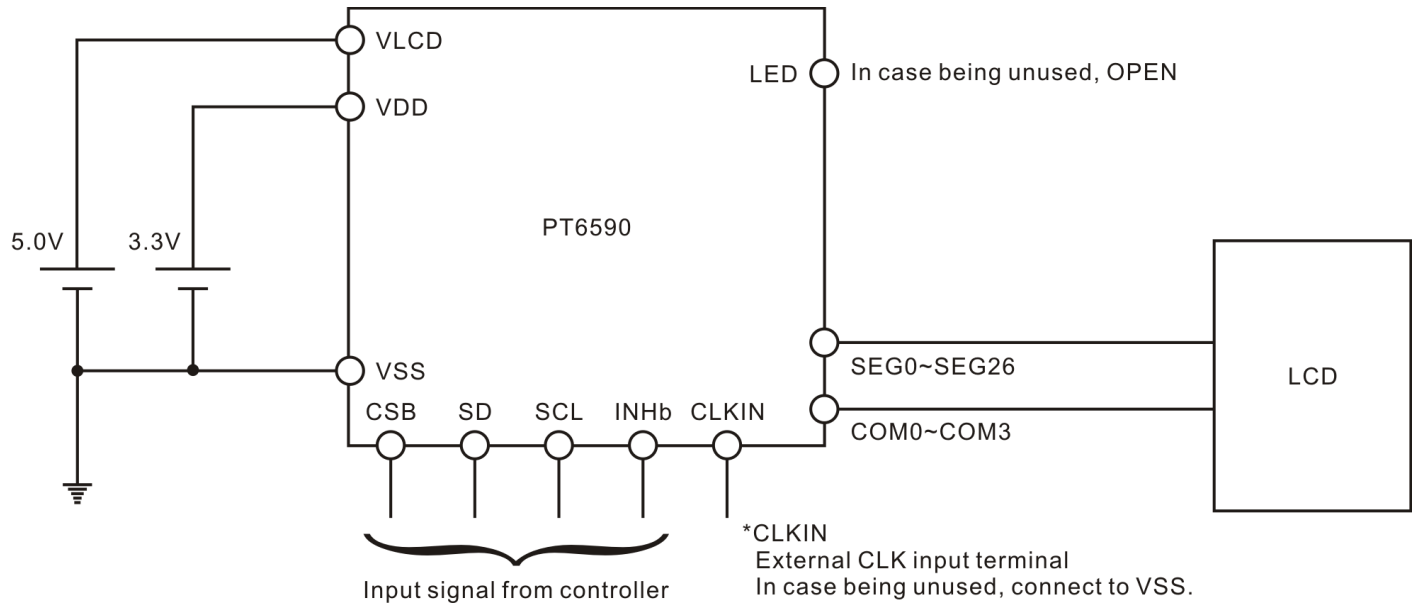


# APPLICATION CIRCUIT

## LED/GPO USING CASE



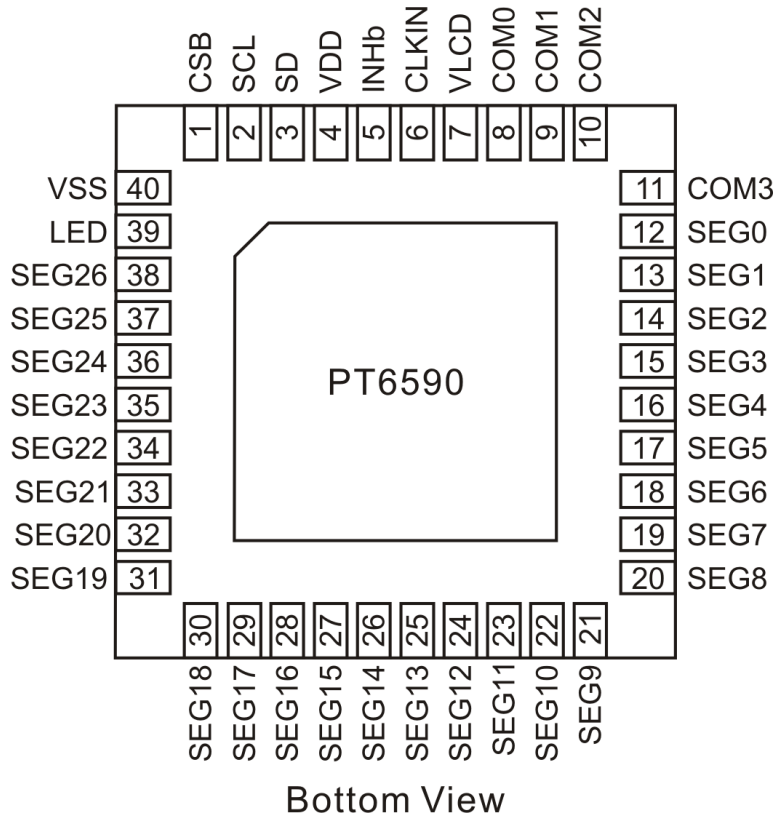
## SEG OUTPUT ONLY CASE



## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6590	40 Pins, QFN	PT6590

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	I/O	Unused case	Description	Pin No.
CSB	I	-	Chip select: "L" active	1
SCL	I	-	Serial data transfer clock	2
SD	I	-	Input serial data	3
VDD	-	-	Power supply for LOGIC	4
INHb	I	VDD	Display turning on/off select terminal H: turning on display, L: turning off display INHb="L": All SEG/COM terminal: output VSS level GPO terminal: output VSS level LED drive terminal: output Hi-Z	5
CLKIN	I	VSS	External clock input terminal (for display/PWM using selectable) Must be connect to VSS when use internal clock mode.	6
VLCD	-	-	Power supply for LCD	7
COM0~COM3	O	OPEN	COMMON output for LCD	8~11
SEG0~SEG22	O	OPEN	SEGMENT output for LCD	12~34
SEG23~SEG26	O	OPEN	SEGMENT output for LCD/GPO	35~38
LED	O	OPEN	LED driver output	39
VSS	-	-	GND	40
EXT-PAD	-	VSS	Substrate	-

## **IMPORTANT NOTICE**

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