Smart Road Sign

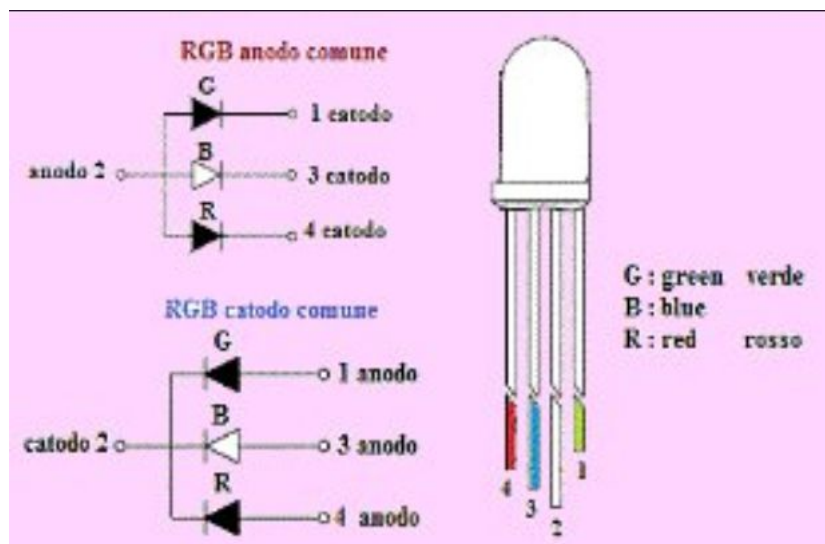DATASHEET Raspberry Pi https://www.raspberrypi.org/documentation/hardware/raspberrypi/README.md

RaspberryPi   pin connections

GPIO PINS: High 3.3 V max Low 0V
- 24 GPIO pins output to drive RGB leds
- 1 pin 5V DC power voltage
- 1 pin GND

› **Pin out diagram**

Peripherals	GPIO	Particle	Pin #			Pin #	Particle	GPIO	Peripherals
	3.3V		1	X	X	2		5V	
I2C	GPIO2	SDA	3	X	X	4		5V	
	GPIO3	SCL	5	X	X	6		GND	
Digital I/O	GPIO4	D0	7	X	X	8	TX	GPIO14	UART
	GND		9	X	X	10	RX	GPIO15	Serial 1
Digital I/O	GPIO17	D1	11	X	X	12	D9/A0	GPIO18	PWM 1
Digital I/O	GPIO27	D2	13	X	X	14		GND	
Digital I/O	GPIO22	D3	15	X	X	16	D10/A1	GPIO23	Digital I/O
	3.3V		17	X	X	18	D11/A2	GPIO24	Digital I/O
SPI	GPIO10	MOSI	19	X	X	20		GND	
	GPIO9	MISO	21	X	X	22	D12/A3	GPIO25	Digital I/O
	GPIO11	SCK	23	X	X	24	CE0	GPIO8	SPI
	GND		25	X	X	26	CE1	GPIO7	(chip enable)
DO NOT USE	ID_SD	DO NOT USE	27	X	X	28	DO NOT USE	ID_SC	DO NOT USE
Digital I/O	GPIO5	D4	29	X	X	30		GND	
Digital I/O	GPIO6	D5	31	X	X	32	D13/A4	GPIO12	Digital I/O
PWM 2	GPIO13	D6	33	X	X	34		GND	
PWM 2	GPIO19	D7	35	X	X	36	D14/A5	GPIO16	PWM 1
Digital I/O	GPIO26	D8	37	X	X	38	D15/A6	GPIO20	Digital I/O
	GND		39	X	X	40	D16/A7	GPIO21	Digital I/O

RGB anodo comune
G 1 catodo
B 3 catodo
anodo 2
R 4 catodo

RGB catodo comune
G 1 anodo
B 3 anodo
catodo 2
R 4 anodo

G : green   verde
B : blue
R : red   rosso

Raspberry Pi 3 GPIO Header

Pin#	NAME			NAME	Pin#
01	3.3v DC Power	⬛	🔴	DC Power 5v	02
03	GPIO02 (SDA1 , I²C)	🔵	🔴	DC Power 5v	04
05	GPIO03 (SCL1 , I²C)	🔵	⚫	Ground	06
07	GPIO04 (GPIO_GCLK)	🟢	🟠	(TXD0) GPIO14	08
09	Ground	⚪	🟠	(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)	🟢	🟢	(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)	🟢	⚫	Ground	14
15	GPIO22 (GPIO_GEN3)	🟢	🟢	(GPIO_GEN4) GPIO23	16
17	3.3v DC Power	🔴	🟢	(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)	🟣	⚫	Ground	20
21	GPIO09 (SPI_MISO)	🟣	🟢	(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)	🟣	🟣	(SPI_CE0_N) GPIO08	24
25	Ground	⚫	🟣	(SPI_CE1_N) GPIO07	26
27	ID_SD (I²C ID EEPROM)	🟡	🟡	(I²C ID EEPROM) ID_SC	28
29	GPIO05	🟢	⚫	Ground	30
31	GPIO06	🟢	🟢	GPIO12	32
33	GPIO13	🟢	⚫	Ground	34
35	GPIO19	🟢	🟢	GPIO16	36
37	GPIO26	🟢	🟢	GPIO20	38
39	Ground	⚫	🟢	GPIO21	40