

# LEGO® Education SPIKE™ Prime Technical Specifications

## Technic™ Color Sensor



<b>Hardware name</b>	Technic™ Color Sensor
<b>Description</b>	The sensor can detect color, reflectivity, or ambient light. The sensor can also be used as a light output.
<b>Key features</b>	<ul style="list-style-type: none"><li>• Color sensing (RGB, HSV, and LEGO® colors)</li><li>• Reflectivity sensing (for line following)</li><li>• Ambient light sensing</li><li>• Emission of white light</li><li>• The sensor has a Technic build geometry that allows for versatile building and easy integration into models</li></ul>
<b>Connector type</b>	LEGO Power Functions 2.0 (LPF2) for connection to LEGO Smarthubs
<b>Wire length</b>	250 mm
<b>Sensor sample rate</b>	100 Hz
<b>Sensor input</b>	<p>Color sensing:</p> <ul style="list-style-type: none"><li>• Optimal reading distance: 16 mm (depending on object size, color, and surface)</li><li>• Output range:<ul style="list-style-type: none"><li>• No object</li><li>• White (LEGO:01; R:244, G:244, B:244)</li><li>• Blue (LEGO:23; R:30, G:90, B:168)</li><li>• Black (LEGO:26; R:0, G:0, B:0)</li><li>• Green (LEGO:28; R:0, G:133, B:43)</li><li>• Yellow (LEGO:24; R:250, G:200, B:10)</li><li>• Red (LEGO:21; R:180, G:0, B:0)</li><li>• Medium azur (LEGO:322; R:104, G:195, B:226)</li><li>• Bright reddish violet (LEGO:124; R:144, G:31, B:118)</li></ul></li></ul> <p>Reflectivity sensing:</p> <ul style="list-style-type: none"><li>• Optimal reading distance: 16 mm (depending on object size, color, and surface)</li><li>• Output range:<ul style="list-style-type: none"><li>• Non-reflective/nothing = 0%</li><li>• Very reflective= 100%</li></ul></li></ul> <p>Ambient light sensing:</p> <ul style="list-style-type: none"><li>• Output range:<ul style="list-style-type: none"><li>• Dark = 0%</li><li>• Bright = 100%</li></ul></li></ul>
<b>Sensor output</b>	<p>LED output:</p> <ul style="list-style-type: none"><li>• Color: white - temperature 4000K</li><li>• Controlled individually (3 LEDs in total)</li><li>• Cannot be used while sensor is in color/light sensing mode</li><li>• Output power: controllable from 0-100% increments of 1%</li></ul>

The LEGO® Education SPIKE™ app may not support all hardware features and functionalities.

