LEDの電流-電圧特性の測定

【目的】　LEDに流れ電流とその両端の電圧にどのような関係があるかを確認し，LEDの発光色と，点灯し始めるときの電圧との関係を調べる。

【準備】「ダイオードの電流・電圧特性測定器 」，LED（赤，黄，紫，白 ) ，整流用ダイオード，グラフ用紙 (方眼)

【方法】

1. 測定器の赤と黒の端子のところにLEDを接続する。向きを間違えないよう注意する。
2. 可変抵抗器のつまみが反時計回りに増し切っていることを確認し，スイッチをONにする。
3. 可変抵抗器を時計回りに少しずつ回していき，LEDに流れる電流*I* とLED両端の電圧*V*を測定する。

※ 始めのうちは電圧が変化しても電流が変化しないことがある。

1. 違う色のLEDについても同様に実験し，電流を縦軸，電圧を横軸としてグラフを描く。

【処理】

 (1) LED 　　 色

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(mA) |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |

(2) LED 　　 色

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(mA) |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |

(3) LED 　　 色

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(mA) |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |

(4)　 ダイオード

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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(mA) |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| 電圧(V) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 電流(A) |  |  |  |  |  |  |  |  |  |  |  |  |  |

　【考察】