

Digital 81b Warming Filter Conversion

```
function calculate() {  
    // Get the user's input from the form. Assume it is all valid  
  
    var skintone = getElement("skintone");  
  
    var kelvin = parseInt(skintone.kelvin.value);  
  
    // Get named <span> elements from the form.  
  
    var conversion = document.getElementById("conversion");  
  
    var a81 = document.getElementById("f_81a");  
  
    var b81 = document.getElementById("f_81b");  
  
    var c81 = document.getElementById("f_81c");  
  
    var d81 = document.getElementById("f_81d");  
  
    var e81 = document.getElementById("f_81e");  
  
  
  
    // Check that the kelvin value is a finite number. If so, display the  
  
    // filters by setting the HTML content of each <span> element.  
  
    if (isFinite(kelvin) && kelvin>0) {  
        // calculate the new kelvin value with a mired shift of 27  
  
        // to simulate the mired shift of an 81b warming filter  
  
        var new_kelvin = 1000000/((1000000/kelvin)-27);  
  
        conversion.innerHTML = new_kelvin.toFixed(0);  
  
        // 81a filter  
  
        new_kelvin = 1000000/((1000000/kelvin)-18);  
  
        a81.innerHTML = "81A = " + new_kelvin.toFixed(0) + " K";  
  
        // 81b filter
```

```
new_kelvin = 1000000/((1000000/kelvin)-27);
b81.innerHTML = "81B = " + new_kelvin.toFixed(0) + " K";
// 81c filter
new_kelvin = 1000000/((1000000/kelvin)-35);
c81.innerHTML = "81C = " + new_kelvin.toFixed(0) + " K";
// 81d filter
new_kelvin = 1000000/((1000000/kelvin)-42);
d81.innerHTML = "81D = " + new_kelvin.toFixed(0) + " K";
// 81ef filter
new_kelvin = 1000000/((1000000/kelvin)-52);
e81.innerHTML = "81EF = " + new_kelvin.toFixed(0) + " K";
}
// Otherwise, the user's input was probably invalid, so display nothing.
else {
    conversion.innerHTML = "";
    a81.innerHTML = "";
    b81.innerHTML = "";
    c81.innerHTML = "";
    d81.innerHTML = "";
    e81.innerHTML = "";
}
}
```