Solarized prints are virtually one-of-a-kind. Once you make a print, it's difficult or impossible to precisely duplicate the results. This is because there are so many variables: You really can't exactly duplicate the amount of initial development (time and agitation) and the time it takes to move the paper from the developer for reexposure and then back to finish development.

Solarizing your exposed film, however, can help solve the problem, while producing different results. This way you can print the resulting negative as many times as you like and produce multiple prints that look virtually the same. One drawback: If you expose film shot in camera, you won't see the results until they are developed, which means you run a high risk of ruining the entire roll of film if exposure and/or development times are wrong. You can simply reprint a badly solarized print with no risk to the original negative. This is one reason film solarization is not as common as print solarization. Another is that most photographers use film that comes in rolls, such as 35mm and medium-format.

Evenly exposing a long roll under an enlarger or other light source is cumbersome; you have to take the film off the reel in total darkness and hold it taut as far away from the light source as possible to make sure all parts receive even exposure. One solution is to have another person in the darkroom to turn the overhead light on and off for you while you hold the unwound film. Or, if available, use a foot pedal to turn the light off and on. You will have to move fast to wind the film back onto the reel when the reexposure is complete, to get the film back in the tank to continue the development. (If you do this, use stainless steel reel; plastic reels are very difficult to load when wet.) A better solution is to solarize sheet film instead of roll film. You process it in trays, just like paper. In fact, you just follow the same steps as you would for print developing. As with any film, use a wetting agent before hanging sheets to dry. If you work with a large-format camera, you take your picture with sheet film and solarize that. Or if you are photographing with 35mm or mediumformat roll film, make an enlarged internegative using ortho litho film or any other sheet film, and solarize that negative while it develops.

An added advantage of the latter method is that the original negative remains intact, so if the solarization is not successful, you can repeat the process using another sheet of film. If you're making interpositives or internegatives once film is exposed either in camera or under an enlarger, follow most of the same steps indicated for solarizing paper. (You won't be able to place roll films on the back of a flat tray or sheet of glass and squeegee off the excess water, but you will be able to with sheet films.)

If you are solarizing film and your standard film developing time is 9 minutes, remove the film from the developer somewhere between one-third and halfway (from 3 to 4 minutes) into the process. When solarizing negatives, slow films are preferable to fast films. Reexposure times will be longer with slow films and thus more easily controlled. Underexpose film you're planning to solarize-by one-half to one full f-stop in camera, and by 10 to 15 percent when making interpositives or internegatives in the enlarger. Also, high-contrast films (such as litho films) and paper grades give a particularly dramatic solarized effect, which helps offset the reduced image contrast that solarization can create. Or, for maximum image contrast, use a #5 filter (or a high-contrast graded paper) when making solarized prints.