## Highlighting

Operation	Keystroke  Emacs provides different	Function	Note  columns and cursor. It highlights on search operations but can also be instructed to			
<u>Highlighting</u>	highlight regular expression	ons, matched delimiters, the cu	irrent line, the current column, the fill column where automatic text wrapping occurs.			
See also: <u>E Customize</u>	<ul> <li>PEL provides the pel-pkg-for-highlight customization group to control some aspect of highlighting. The user options are:</li> <li>pel-use-auto-highlight-symbol activates the auto-highlight-symbol external package.</li> </ul>					
	<ul> <li>pel-use-beacon-mode activates beacon external package automatically or under user action, to "flash" highlight the cursor.</li> <li>pel-use-iedit activates iedit external package which allows you to interactively edit all symbols inside current scope or marked replace pel-use-fill-column-indicator activates the fill-column-indicator external package for Emacs versions earlier than 27.1.</li> <li>This highlights a vertical line on the fill-column, the column where automatic line wrapping occurs (when the mode is active).</li> </ul>					
			ghlight-indentation external package that helps see the indentation.  ge to create a vertical bar across the entire buffer that moves point (the cursor).			
	* *		r-delimiters.el external package that highlights matching parens delimiters.			
	<ul> <li>pel-use-rainbow-mode activates rainbow-mode external package which highlights strings containing color codes.</li> <li>The buillt-in show-paren-mode provides matching parens highlighting.</li> </ul>					
	PEL provides a set of key bindings to various highlight control commands that are regrouped under the pel:highlight prefix: <f11> h  They are listed in the table below along the native Emacs key bindings for highlight control.</f11>					
Open this PDF file. See also: <u>N Help/Info</u>	<f11> h <f1></f1></f11>	(pel-help-pdf &optional OPEN-WEB-PAGE)	Open the <u>S</u> Highlight local PDF. If the prefix argument (like <b>C-u</b> or <b>M</b> ) is used, then it opens the remote GitHub hosted raw PDF instead. If the <b>pel-flip-help-pdf-arg</b> user-option is set it's the other way around.			
∑ Customize PEL	<f11> h <f2></f2></f11>	(pel-customize-pel	Customize the following PEL support:			
highlighting control		&optional OTHER- WINDOW)	<ol> <li>PEL support for highlighting (pel-pkg-for-hightlight)</li> <li>PEL support for mode line (pel-pkg-for-modeline)</li> </ol>			
			<ul><li>3. PEL support for parens (pel-pkg-for-parens)</li><li>If OTHER-WINDOW is non-nil (use C-u), display in other window.</li></ul>			
∑ Customize Emacs	<f11> h <f3></f3></f11>	(pel-customize-library &optional OTHER-	Customize Emacs support for buffer highlight management: <u>auto-highlight-symbol</u> , <u>iedit</u> , <u>hl-line</u> , <u>highlight-indentation</u> , <u>paren-showing</u> , <u>rainbow-mode</u> , <u>rainbow-</u>			
highlighting control		WINDOW)	delimiters, smartparens, vline, fill-column-indicator (Emacs < 27.1), beacon (Emacs >= 27.1)			
Font Locking Control	Use these commands to toggle font locking in the buffer or globally.					
Toggle syntax highlighting in	<f11> h F</f11>	(font-lock-mode &optional	Toggle syntax highlighting in this buffer (Font Lock mode).			
current buffer See also: ∑ Faces/Fonts		ARG)	<ul> <li>With a prefix argument ARG, enable Font Lock mode if ARG is positive, and disable it otherwise.</li> </ul>			
Enable/disable highlight	<f11> h L</f11>	(hi-lock-mode &optional	Toggle selective highlighting of patterns (Hi Lock mode).			
lock mode		ARG)	<ul> <li>With prefix argument, enable Hi Lock mode if ARG is positive, disable it otherwise.</li> <li>When text is already highlighted toggling the mode off will remove all highlighting; turning it back on will not restore the highlighting.</li> </ul>			
Enable highlight lock mode to all buffers	<f11> h M-L</f11>	(global-hi-lock-mode &optional ARG)	Toggle Hi-Lock mode in all buffers.  • With prefix ARG, enable Global Hi-Lock mode if ARG is positive; otherwise, disable it.			
Highlight Blocks	These commands are used to highlight matching parentheses, but also braces and square brackets. Can be used in any editing mode, not restricted to Lisp only (but very useful in for editing Lisp code).					
Enable/Disable highlighting matching block (),{},[]	<f11> h (</f11>	(show-paren-mode &optional ARG)	Toggle visualization of matching parens (Show Paren mode).  • With <b>C-u</b> prefix argument, enable Show Paren mode if positive, disable it otherwise.			
	• <f12> M-9 • M-<f12> M-9</f12></f12>		▼ <f12> M-9 and M-<f12> M-9 bindings are available for several modes.</f12></f12>			
Show paren-mode info	<f11> h ? (</f11>	(pel-show-paren-info &optional APPEND)	Show 'paren-mode' control user-options in *pel-highlight-info* buffer.  • With non-nil optional APPEND argument, append the information to the buffer.			
Enable/Disable coloured	<f11> h M-(</f11>	(rainbow-delimiters-mode	Highlight nested parentheses, brackets and braces with depth-specific colours.			
highlight of nested blocks (), $\{\},[]$		&optional ARG)	<ul> <li>Customize the depth and colours with M-x customize-group rainbow-delimiters: with PEL access its customization group with <f11> h <f3> 8 key sequence.</f3></f11></li> <li>Requires: rainbow-delimiters.el 2 activated by pel-use-rainbow-delimiters</li> </ul>			
Highlight Cursor	Requires a external beacon package. PEL activates when pel-use-beacon-mode is turned on from start or on request.					
(Emacs >=27)			e mode on explicitly. If it is set to <b>use-from-start</b> , PEL activates it automatically.			
Toggle beacon-mode	<f11> h M-b</f11>	(beacon-mode &optional ARG)	Toggle the beacon-mode. This highlights the cursor changing focus.  It is the key binding is only active when pel-use-beacon-mode is not nil.			
Blink beacon at cursor	<f11> h b</f11>	(beacon-blink)	Blink the beacon at the position of the cursor. Even when beacon-mode is not active.			
Highlight Recent Changes		This mode is a quick way to highlight what has been recently changed in the buffer.  All highlighting in a buffer is <b>non persistent</b> : it is forgotten when buffer is killed.				
Enable/Disable Highlight	<f11> h M-c</f11>	(highlight-changes-mode	Toggle highlighting changes in this buffer (Highlight Changes mode).			
Changes Mode		&optional ARG)	<ul> <li>With prefix argument, enable Highlight Changes mode if it's positive, else disable it.</li> <li>In this mode the most recent changes in the buffer are highlighted.</li> <li>when enabled, syntax highlighting does not work properly for the new text.</li> </ul>			
Highlight Current Line	Highlighting the current lin	ne may help to find the cursor	when editing with big windows. These commands control line highlighting.			
Toggle line highlight mode	• <f11> h 0</f11>	(hl-line-mode &optional	Toggle highlighting of the current line (HI-Line mode) in the current buffer.			
See also: <u></u> <b>Cursor</b>	<ul><li><f11> 0</f11></li><li>When same buffer is sh</li></ul>	ARG)	With prefix argument ARG, enable HI-Line mode if ARG is positive, disable it otherwise.			
	<ul> <li>When same buffer is shown in several windows, the highlighting might show in each of them.</li> <li>Change that with pel-toggle-hl-line-sticky with: <f11> h s</f11></li> <li>Use <f11> 0 twice to locate your cursor.</f11></li> </ul>					
Toggle line highlighting affecting all windows	<f11> h s</f11>	(pel-toggle-hl-line-sticky)	Toggle current line highlight to all windows with current buffer or just the current one.  • Toggles the value of 'hl-line-sticky-flag' between t and nil.			
Change color of highlight line for session	<f11> h c</f11>	(pel-set-highlight-color COLORNAME)	Set the colour of the highlight line used in the line highlight mode (affects all buffers).  • Prompt for color name, use tab completion to see available colour names.			
	The change does not perform the change does not perfo		To select a persistent color, then customize the <b>highlight</b> user option (see next row).			
<u>S</u> Customize highlight color and attributes permanently	<f11> h <f4></f4></f11>	(pel-customize-highlight)	Customize the <b>highlight</b> user option color and other attributes.			
,	With this you can set of	As with all customizations, you can activate the change for this Emacs session or save it to make it persist across Emacs sessions.  With this you can set other attributes such as underlining (which will underline only text present in the buffer, useful to detect end-of-line whitespace), and other attributes.				

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>	
Visualize Color Codes	Using rainbow mode: highlight the color of color codes. 🤞 See color code names in rainbow customization group.			
Toggle rainbow mode on/off	<f11> h M-r</f11>	(rainbow-mode &optional ARG)	Colorize strings that represent colors.  • This will fontify with colors the string like "#aabbcc" or "blue".    Requires: rainbow-mode   activated when pel-use-raibow-mode is t.	
	When rainbow-mode is active inside a buffer you can easily build a command line that sets the color elements for that command as shown at right (in Emacs running inside a terminal).  With overwrite-mode on you can change the hex color values and see the impact right away!		File Edit Options Buffers Tools Defs Lisp-Interaction Help ;; With rainbow-mode active in a buffer: ;; The color names (like blue, brightwhite, red) are shown.  "color 'fg:#bbccdd,fg+:#ddeeff,bg:#ff4455,preview-bg:#22ff44,border:#ffff44'"  -UUU:**F1 *scratch* All (4,16) (Lisp Interaction structure with the color of the color	
Highlight current column	The following command provide a vertical line across the entire window at the cursor location.  Useful when creating tables or checking indentation manually.  viline also provides the viline-global-mode to activate the vertical line in all buffers; PEL has no binding for it because it slows Emacs too much.			
Toggle Vline Mode See also: <u>∑ Cursor</u> <u>∑ Hide/Show</u>	• <f11> h   • <f11> 9</f11></f11>	(vline-mode &optional ARG)	Toggle the display of a vertical line spanning the entire window at the cursor column.  Requires: vline.el activated when pel-use-vline user option is t.	
Highlight Fill Column	The fill column identifies the end of line where line wrapping occurs.  • Some development groups impose a style where a line limited to a specified length. This helps see this limit as you type.			
Toggle ruler line on fill column  See also:	• <f11> h \ • <f11> <f5> \ • <f11> 8</f11></f5></f11></f11>	(fci-mode &optional ARG)     (display-fill-columnindicator-mode &optional ARG)	Toggle a vertical ruler line shown at the buffer's fill-column.  For Emacs earlier than 27.1, it requires the fill-column-indicator external package activated by PEL use-fill-column-indicator user option set to t.  For Emacs 27.1 or later, the built-in display-fill-column-indicator-mode is used.  ↑ fci-mode interferes with pop-up menu displays in terminal-mode, at least with the one used by flyspell-correct-word-before-point: the menu lines become all jagged, they do not line up vertically. The problem does not affect Emacs running in graphics mode.	
<b>Highlight Indentation</b>	Both require highlight-	indentation external package.	PEL activates it when pel-use-highlight-indentation user option is t.	
Highlight indentation based on spaces	<f11> h M-i</f11>	(highlight-indentation- mode &optional ARG)	Highlight indentation minor mode highlights indentation based on spaces.	
Highlight indentation of current line	<f11> h M-c</f11>	(highlight-indentation- current-column-mode &optional ARG)	Highlight Indentation minor mode displays a vertical bar corresponding to the indentation of the current line	
Ruler	Shows a ruler at the top of the window indicating several markers:		# e -nw - aspellbash emacs-black - ttys007 - Y#8  Tools Lisp-Interaction Help	
Show the ruler	<f11> b -</f11>	(ruler-mode &optional ARG)	Toggle display of ruler in header line (Ruler mode) in window(s) of current buffer.  • With prefix argument ARG, enable Ruler mode if ARG is positive, disable it otherwise.	
See also: <u>S Filling/Justification</u>	<ul> <li>The ruler markers are:</li> <li>  Current cursor position</li> <li>! Marks every 5 positions.</li> <li># Current comment-column value, set by C-x;</li></ul>			
Automatic Symbol Highlighting	The following require the <u>auto-highlight-symbol</u> external package.    PEL activates it when pel-use-auto-highlight-symbol user option is t.			
Toggle auto-highlight- symbol mode	<f11> h a</f11>	(auto-highlight-symbol- mode &optional ARG)	Toggle Auto Highlight Symbol Mode: in that mode the symbol at point and all its instances in the visible part of the buffer is highlighted after some delay.  Which was a symbol mode and all its instances in the visible part of the buffer is highlighted after some delay.	
Interactive Highlighting	Highlight Specified Text or	Highlight Specified Text or Text Matching Regexp (Hi Lock Mode)		
Highlight/un-highlight current line	<f11> h h</f11>	(pel-highlight-line &optional CHANGE- COLOR)	Toggle highlighting of the current line with the current PEL line highlight color  • Default color defined by <b>pel-highlight-color-defaul</b> t user-option.  • Modify current value by pressing command with any key prefix, like <b>C-u</b>	
Remove all highlight	<f11> h M-H</f11>	(pel-remove-line-highlight)	Remove all highlighting in buffer.  • A Prompts before proceeding as it also removes bm bookmark highlighting.	
Regexp-based interactive highlighting		The following commands highlight text selected by regular expressions selected in various ways.  The highlighting is adjusted as text is modified in the buffer. The unhighlight-regexp command removes the previously activated highlighting.		
Highlight text that match regexp	• M-s h r • <f11> h r</f11>	(highlight-regexp REGEXP & optional FACE)	Set face of each match of REGEXP to FACE.  • Interactively, prompt for REGEXP using 'read-regexp', then FACE. Use the global history list for FACE.	
Highlight entire line that contain text that matches regexp	• M-s h l • <f11> h l</f11>	(highlight-lines-matching- regexp REGEXP &optional FACE)	Set face of all lines containing a match of REGEXP to FACE.  • Interactively, prompt for REGEXP using 'read-regexp', then FACE. Use the global history list for FACE.	
Highlight matches of phrase	• M-s h p • <f11> h p</f11>	(highlight-phrase REGEXP & optional FACE)	Set face of each match of phrase REGEXP to FACE.  Interactively, prompt for REGEXP using 'read-regexp', then FACE. Use the global history list for FACE.  When called interactively, replace whitespace in user-provided regexp with arbitrary whitespace, and make initial lower-case letters case-insensitive, before highlighting with 'hi-lock-set-pattern'.	
Highlight symbol found near point	• M-s h . • <f11> h .</f11>	(highlight-symbol-at- point)	Highlight each instance of the symbol at point.  • Uses the next face from 'hi-lock-face-defaults' without prompting, unless you use a prefix argument.	
<u>Un-highlight</u>	• M-s h u • <f11> h u</f11>	(unhighlight-regexp REGEXP)	Remove highlighting of each match to REGEXP set by hi-lock.  • Interactively, prompt for REGEXP, accepting only regexps previously inserted by hi-lock interactive functions. If REGEXP is t (or if <b>C-u</b> was specified interactively), then remove all hi-lock highlighting.	

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>	
<u>List Highlighted Text</u>	Write a list of currently highlighted text at point with the first command below, then edit if needed and then use the second command to highlight more of the text. These commands can be used to store the highlighting info in comments for persistency, and later re-highlight them using these comments.			
Insert current highlighting regexp/face pairs in buffer at point in comments.	• M-s h w • <f11> h w</f11>	(hi-lock-write-interactive- patterns)	Write interactively added patterns, if any, into buffer at point.  • Interactively added patterns are those normally specified using 'highlight-regexp' and 'highlight-lines-matching-regexp'; they can be found in variable 'hi-lock-interactive-patterns'.	
Extract regexp/face pairs from comments in current buffer and highlight them.	• M-s h f • <f11> h f</f11>	(pel-hi-lock-find-patterns)	Add patterns from the current buffer to the list of hi-lock patterns.  Does nothing if the current major mode's symbol is a member of the list hi-lock-exclude-modes.	
			pel-hi-lock-find-patterns is a thin wrapper over hi-lock-find-patterns that displays a warning if executed when the buffer is not already in hi-lock-mode.	
<u>iEdit mode</u>	iEdit Mode - Edit multiple regions in the same way simultaneously.  This mode is very useful.  Requires the iedit external package. PEL downloads, installs it when any of the pel-use-iedit or pel-use-lispy user options is set to t.			
Toggle iedit mode See also:	• C-; • <f11> e • <f11> h i • <f11> m i</f11></f11></f11>	(iedit-mode &optional ARG)	Toggle iEdit mode: edit all symbols in scope or region simultaneously.  ⚠ Both iEdit and Flyspell use the C-; key as their default binding. PEL detects and reports that situation: modify the binding of one of them if you see it.  ➤ See ∑ Search/Replace where all the iedit-mode commands are described.	
Variables hi-lock-file-patterns-policy	Controls whether Hi Lock mode should automatically extract and highlight patterns found in a file when it is visited. Its value can be nil (never highlight), ask (query the user), or a function. If it is a function, hi-lock-find-patterns calls it with the patterns as argument; if the function returns non-nil, the patterns are used. The default is ask. Patterns are always highlighted if you call hi-lock-find-patterns directly, regardless of the value of this variable.			

## Highlight - References

Topic & Link	Description & Notes	
Gnu Emacs - 14.13 - Interactive Highlighting	Describes interactive highlighting, a topic for most of the commands listed above.	
The Definitive Guide To Syntax Highlighting	A blog, written in 2104, that provides an overview of the highlighting that can be done with Emacs.	
e2ansi, syntax highlighting for less, powered by Emacs	Using Emacs to syntax highlight less output.	